173072

Class_____ No._____

Presented by

Exchange.

Bdg.2.20

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA

Digitized by the Internet Archive
in 2016

https://archive.org/details/westvirginiamedi2219west

CKS

THE WEST VIRGINIA
MEDICAL JOURNAL
Published by the West Virginia State Medical Association

VOLUME XXII.—NO. 1 CHARLESTON, W. VA. JANUARY, 1926

FIFTY-NINTH ANNUAL MEETING
MORGANTOWN, W. VA., MAY 25th, 26th, 27th

CALCREOSE

CALCREOSE (calcium creosotate)
is a loose chemical combination of creosote and calcium hydrate from which the creosote is liberated in the body. Because CALCREOSE can be given in fairly large quantities over long periods of time without apparently causing any gastric disturbance, it is of particular value as an adjunct in the treatment of various respiratory diseases.

In cases of idiosycrasy
to creosote, small doses of CALCREOSE are recommended for the first two or three days, then gradually increase the dose.

POWDER
TABLETS
SOLUTION

Samples of Tablets on Request.

THE MALTBIE CHEMICAL CO. - Newark, N. J.

[TABLE OF CONTENTS ON PAGE XXIV]

INFANT DIET MEAD'S MATERIALS

LACTIC ACID MILK

For Infant Feeding

AND NOW—a *Lactic Acid Milk* in Powder Form that can be mixed with water and made ready for Infant Feeding in a few minutes.

MEAD'S LACTIC ACID MILK flows easily through the nipple of the feeding bottle—

Is uniform in composition—

Always fresh and always ready.

The price to the Mother is as cheap as any good-grade milk.

Users of Lactic Acid Milk will welcome this new product.

Samples of Mead's Lactic Acid Milk furnished gladly on request.

The Mead Policy

Mead's Infant Diet Materials are advertised only to physicians. No feeding directions accompany trade packages. Information in regard to feeding is supplied to the mother by written instructions from her doctor, who changes the feedings from time to time to meet the nutritional requirements of the growing infant. Literature furnished only to physicians.

INFANT DIET MEAD'S MATERIALS

INFANT DIET MEAD'S MATERIALS

MEAD JOHNSON & COMPANY, Evansville, Indiana, U. S. A.

Manufacturers of Infant Diet Materials

The West Virginia Medical Journal

Directed and Edited by the Committee on Publication

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS:

WALTER E. VEST, Huntington — HARRY M. HALL, Wheeling — J. HOWARD ANDERSON, Marytown — C. W. WADDELL, Fairmont

MR. S. O. NEALE, *Secretary-Business Manager*, Charleston

Entered as Second Class Matter, January 1, 1926, at the Postoffice at Charleston, West Virginia

Volume XXII JANUARY : 1926 *Number 1*

OBSERVATIONS UPON THE USE OF PITUITRIN IN OBSTETRIC PRACTICE*

By JAMES R. BLOSS, M. D.
Huntington, W. Va.

IN this short paper I shall not take up any of the history of this preparation, and will give but brief mention of its physiological action.

An understanding of the physiological action is, however, of the utmost importance if we are to successfully and intelligently employ this agent in obstetric work.

Briefly its action is one of stimulation of the contractions of involuntary muscle fibres. To this property we owe its efficiency in this particular line of our professional labor.

The practice of obstetrics is, for obvious reasons, the most important of all of the special branches of our profession. Any advance made to improve our skill and technique is welcomed with open arms.

We know of no one thing which has been of such momentous importance to obstetrics since the introduction of obstetric forceps, asepsis, and the perfecting of the details of Caeserian section, as has been the employment of Pituitrin.

Now for our observations.

To begin with, this agent will not overcome obstructions in the pelvic canal. Yet we fear that some physicians feel it will, in some way, dilate a contracted or deformed pelvis until a safe delivery may be accomplished.

This observation leads me to emphasize the paramount importance of making a thorough

* Read at annual meeting, West Virginia State Medical Association, Bluefield, June 10, 1925.

JUL 25 1950

physical examination of those women engaging us for their accouchment. The pelvis should be thoroughly examined by mensuration, palpation and inspection. Do not fail to examine its interior also, by either vaginal or rectal route as previous experience and training proves most satisfactory. Personally we prefer the vaginal examination, exercising as painstaking aseptic precautions as if we were preparing to do a version or use forceps.

Having a previous knowledge of obstruction in the pelvic canal from either a tumor, deformity or contraction, it is certainly the height of folly to use pituitrin.

The second observation is that this agent will not replace forceps in those especial cases where the use of forceps is indicated. With a uterus contracting to the limit of its ability and yet falling just short of furnishing the necessary power to expel the child, it will do no good to lash it to the point of rupture by the administration of this powerful stimulant.

It will be found, in such patients, that the use of forceps or of the vectis will change the position of the head to a more correct one so far as the diameters are concerned, or reduce a slight extension of the head to one of proper flexion, after which the contractions of the uterine muscles will be of amply sufficient power for normal delivery.

In this connection attention is called to the necessity for determining whether or not the uterus is simply contracting violently, giving great pain, but with no expulsive power, no push as it were. More like a football team where there is no captain, and each man is playing an individual game.

It would seem hardly necessary to mention that this agent should not be employed in full doses prior to the complete dilation of the cervix. Yet the fact that it is so used, and frequently, by medical men makes us pause to give a warning observation. Many have called attention to the danger of uterine rupture under such conditions. Because no greater number of accidents are reported, and probably do not occur, we fear that too many physicians lose sight of the injury inflicted upon the infants.

The mere fact that the infant lives through this catastrophe is not sufficient to make us feel free of mal-practice. Personally we feel that birth-traumata in the form of injury to the very delicate brain tissues occur far more frequently than we realize. These may be in the form of pressure injuries to the brain tissue itself, or as minute hemorrhages either in the brain tissues or in the meninges. Because of the fact that the higher functions, that is of thinking, feeling and acting, are not developed at birth these injuries pass unnoticed. Only the passage of years and a minutely careful system of case recording will be sufficient to prove that the whole life of these infants delivered expeditiously by the use of pituitrin, are not unfavorably influenced because of natal brain injuries.

Remember we may have birth-marks inside the skull as surely as on the surface of the body. The one only disfigures the physical appearance, while the other may change the whole life, the very soul, of the future adult.

Let us bear in mind this thought of our responsibility in the moulding of the lives of individuals, when we get in a hurry. Again, is not obstetrics the most important of all the specialties of medicine?

So much for the things which we have observed that pituitrin will NOT do.

Our next consideration is what will pituitrin do, which makes it such a valuable agent for our use.

It will, in the majority of cases, though not in every instance, stimulate the expulsive efforts of the uterus. I would emphasize "EXPULSIVE EFFORTS". Often, as we mentioned a few moments ago, we find a uterus contracting at frequent intervals, every two or three minutes possibly, with a partial dilation of the cervix, when an examination is made during one of those contractions we find that the head does not advance against the cervical ring with sufficient force to complete the dilation. It is more a uterine spasm, as it were.

Under such conditions we give from two

to four minims of Pituitrin, repeating it at intervals of twenty to sixty minutes, as the exigencies of the case require. We have observed that the character of the uterine contractions will change in the majority of cases. Instead of the spasmodic contractions with no power but much pain, we will find a steady, strong, regular expulsive contraction with far less pain complained of. The dose must not be large enough to cause an almost continuous contraction. There is great danger of asphyxiating the unborn infant if this is brought about by too large or too frequent doses. It should not be given to an exhausted woman,—morphine and a few hours of rest are indicated under the circumstances.

All of us have had trouble with the "lazy" uterus, so called. In our experience this is usually a patient who has been confined a number of times. On examination we find a cervix fairly well dilated but softened until it can readily admit our closed fist. The uterine muscle is not contracting, or when it does the effort is very feeble. The perineum is soft, relaxed and dilatable. The head well down into the brim.

These are the cases where pituitrin in 1/2 to 1 cc doses acts safely, and like magic. Be careful, however, for it may act precipitately, expelling the child so powerfully as to injure it if the cord is about the neck.

Finally this agent is one of our greatest aids for preventing post-partum hemorrhage, or combatting it when it occurs, remembering of course that its effects are comparatively transient, and have not the lasting effects of the preparations of ergot. It is our rule to give 1 cc as a routine to all patients after the delivery of the secundines.

SUMMARY

First—Pituitrin will not overcome obstructions in the pelvic canal.

Second—It will not take the place of forceps or Caeserian Section.

Third—It will stimulate the contractions of the inert uterus.

Fourth—In the majority of instances it will, in carefully adjudged doses, overcome spasmodic contraction of the uterus. It should not be used, however, when the patient is fretful and worn out to the point of exhaustion.

Fifth—Observation and experience with its use convince me that Pituitrin is a valuable addition to the armamentarium of the obstetrician, but that it is a dangerous instrument in the hands of the careless, the inexperienced, and those ignorant of its virtues and limitations.

Sixth—That it should have no place in the "delivery-bag" of the midwife, either male or female.

DISCUSSION

Dr. PHILIP F. BARBOUR, Louisville, Ky.:

I am very glad to hear Dr. Bloss confirm some of the things I said yesterday about intracranial hemorrhage. One of the things that pediatricians would like to see emphasized is that the baby is just as important a part of obstetrical practice as the mother. Many times the obstetrician delivers the baby and thinks no more about it. I believe a little care given the baby at this time is going to prevent many of those sad consequences which many times mean a very sad and horrible life in the future. I can not say anything much about pituitrin in obstetrical practice, because I am not an obstetrician, but it seems to me that pituitrin is a very valuable aid if used with good, sound common sense.

Dr. L. V. GUTHRIE, Huntington:

It has been twenty-eight years since I had charge of an obstetrical case, so I shall not discuss Dr. Bloss's paper from the obstetrical standpoint. Prior to that time I had considerable experience, as I was assistant resident physician at the Maternity hospital in Baltimore and also had many cases in private practice. But during the twenty-eight years since then, I have had much experience with the end products of high-geared obstetrics. These modern men are so busy that they will go in, wait an hour, then slap on the forceps and make the head fit, instead of waiting for nature. In examining idiots and imbeciles admitted to the various state hos-

pitals I always ask if forceps were used in delivery, and it is surprising how often I get an affirmative answer. I do not ask that question when I see or know there is a hereditary taint. This procedure is helping to fill up our hospitals for mental cases.

Of pituitrin I can not say so much, because it has come into use since I have been out of general practice. It certainly must be a very valuable aid when properly used. Perhaps it will do some damage to the woman, as the gynecologist will tell you, perhaps it will produce a tear. But certainly it can not do as much harm as the forceps, which harm both mother and child. I want to put in a plea for more careful obstetrics. Dr. Bloss has used this remedy very successfully, I think because he has used judgment. He has not forced nature, but has used it only when nature needed a little stimulation.

Dr. WALTER W. POINT, Charleston:

One point that impressed me in Dr. Bloss's paper more than anything else was the importance of careful diagnosis of the condition. I think a thorough vaginal examination, with proper precautions, is of the utmost importance. I do not like to use pituitrin in more than half c. c. doses. If that does not give the effect desired, I use the forceps. I think that is better than letting the case drag along while the woman suffers agony.

Dr. C. O. HENRY, Fairmont:

I am like Dr. Guthrie; pituitrin came into use about the time I was ready to quit. I have used it four times, with good results, and was scared to death every time I used it for fear I would do an injury that I could not repair. When I get up to talk to you about this new remedy it takes me back to a meeting of this association, when it was called a medical society, in our worthy president's town, Parkersburg. Dr. D. Mayer of Charleston, was president, and Dr. Ewing, one of our old-time physicians, read a paper on the death of a woman who had died in confinement. He did not know what had killed her, and the doctors of that time were at a loss to know, though they guessed a good deal. Had they used pituitrin at the time they would have attributed her death to that—ruptured uterus.

I was very much pleased with Dr. Bloss's paper. If I were young, as he is, and doing obstetrical practice, I should be just as careful as he is. Dr. Barbour's talk yesterday, and Dr. Guthrie's talk this morning, from his wide experience along this line, have emphasized the fact that this is a remedy which must be used carefully. The lives of two people are at stake if it is used indiscriminately and ignorantly.

Dr. S. H. D. WISE, Parkersburg:

I think it requires just simply the application of common sense to use pituitrin. I do not know of any one place where a drug can be used, just going into low gear and then going into high gear. If you have a relaxed, lazy condition, then use it, two or three drops. I do not think it is wise to stop then, but keep on using it. That effect will wear off. The placenta may become detached. I know in one of my cases the mother fainted, and I did not know what was the matter until after the birth was completed, when I saw a clot on the placenta. When I see a case with this relaxed uterus, which would drag along for several hours, I get my pituitrin ready, get a little chloroform ready, give the woman a little chloroform to get away from the pain, and she wakes up with a smile. I do not believe any man should use it unless he knows when to use it and how to use it.

Dr. C. A. RAY, Charleston:

I have been doing obstetrics for a long time, and have used pituitrin. I began to use pituitrin about the time I began to hear of high blood pressure. Sometimes, with the use of pituitrin judiciously, I have not seen blue babies afterwards, but red babies, and I have wondered, if pituitrin is a powerful agent for raising the blood pressure, how much damage we might do to that baby's brain by raising the blood pressure. Thinking of that, I have used less and less pituitrin, and more often forceps.

Dr. N. R. PRICE, Marlinton:

I think Dr. Bloss's paper is very well prepared. The giving of pituitrin is purely a matter of judgment. He has emphasized the necessity of thorough examination to determine that there is no discrepancy between the passenger and the passage-way. He has emphasized that the cervix must be thoroughly dilated. Now, pituitrin has been used in hospitals for a long time, and, in the doses which Dr. Bloss mentioned, has not given higher mortality. When listening to the paper of Dr. Barbour yesterday, I was wondering which would be more harmful to the baby, to lie in the pelvis under constant pressure, whether that does the baby more harm than to use pituitrin in reasonable doses and get delivery. I personally do not believe there is a man in the universe who can put on a pair of forceps and deliver a baby with the same amount of proficiency that nature will do it, with the help of small doses of pituitrin. Last year a speaker, in talking about the causes for infant mortality, showed that about 26 per cent of all normal deliveries have some trauma, so I do not see why we should be so quick to jump on pituitrin as the cause.

Dr. H. M. HALL, Wheeling:

I have seen in my own cases, and observed in those of others, the use of pituitrin where everything had been held up because some one had made measurements proving that the child could not possibly be born the normal way, and later under small doses of pituitrin the head would come through all right. I just want to ask Dr. Bloss the direct question whether pelvimetry, as usually carried out, is an exact science.

Dr. BLOSS, closing the discussion:

First, replying to Dr. Wise, some four or five years ago I had two or three of those experiences. I gave a little pituitrin, and they kicked up a fine set of uterine contractions, and then they died down. I lost my nerve and didn't give any more. Since then I have had the results he speaks of, one partial and one complete separation of the placenta. Since then I have kept up the administration of pituitrin, kept boosting, boosting, — just giving enough to keep up the contractions in a normal way.

Now, about raising the blood pressure. It is a question in my mind whether pituitrin given in small doses will raise the mother's blood pressure, or the infant's. We know the mother's blood and the infant's is separate, and I think before the infant's blood pressure would be raised the placenta would be separated from the uterine wall, where you get violent contractions with large doses. You do get some red babies; they look just nice and pink, and, frankly, I like to see them that way when they are born. They cry more quickly, look better, and the valve contracture of the foramen ovale snaps back much better.

Answering Dr. Hall, I must say I do not believe pelvimetry is an exact science. One man measures and gets one result, and the next man gets another. In the cases on which I do pelvimetry myself, I find that it helps me in those cases that are evidently contracted. It gives me an idea as to whether there is a possibility of getting the baby through that uterine canal. One of the most difficult things I know of is to take an unmolded head through the abdominal wall just above the symphisis and push it down and see if it will engage. I usually see the woman at the seventh or eighth month and push it down and see if it will fit, but I can not tell whether it will go through or not; that is on the lap of God. I use vaginal examinations, and when you have examined your patient then you can tell whether the head is coming down into the pelvis and is molding. If the contractions are not strong enough, then give a little pituitrin, not enough to rupture the uterus, not enough to separate the placenta.

Now, about the use of forceps. I have used them a great deal, and even went so far as to have a special pair of forceps made, but I have come to the conclusion that before I ever do another high forceps delivery they can get another doctor, or I will do Cesarean.

MANAGEMENT OF FRACTURES OF THE FEMORAL SHAFT*

By A. G. RUTHERFORD, M. D.,
Welch Hospital No. 1, Welch, W. Va.

IN these modern days when so many advances are being made in scientific medicine and surgery, it seems almost necessary to apologize for the presentation of a paper on such an ancient and commonplace subject as the Management of Fractures of the Femoral Shaft. The fact remains, however, that anyone who sees and studies the end results of a large series of these cases from a standpoint of function, finds much to be desired. The further fact, that a multitude of methods are advocated by as many surgeons and teachers, shows that the last word has not been written on this subject.

In presenting this paper, my object is to demonstrate the fact that no one method can be used in all cases and that in the majority of cases although "the closed method of reduction" is the one of choice, nevertheless, it often becomes necessary to fall back upon the open reduction method when proper function cannot be obtained.

Excellent results in the treatment of fractures of the shaft of the femur are directly dependent on the efficiency of traction and countertraction. The most efficient traction and countertraction are obtained by the use of calipers and the Thomas splint, after the method of Pearson. Manipulation and caliper traction can frequently be used to correct deformity and promote union in cases of delayed union of the femur. In non-union it is a valuable adjunct as a preliminary to gain length before operative treatment. A protective weight-bearing appliance should be accepted as standard in the treatment of all fractures of the shaft of the femur in adults. The Thomas walking caliper splint is the practical solution of the problem.

It is our practice in femur fractures where internal splinting has been done, to begin active motion within ten days. At the end of eight weeks the patient is allowed out of bed, and if deemed necessary, a Thomas walking caliper splint is used. This plan has permitted a number of patients to return to their former occupation in five or six months with excellent function, whereas with immobilization for ten or twelve weeks, patients were unable to return to work for as long as twelve months. . . . . *The intelligent use* of active motion has materially reduced the period of convalescence and improved the functional end results.

It is the opinion of surgeons that although generally speaking no simple fracture should be operated upon if there is a reasonable anatomic alignment of the fractured bones, in many cases of femur fracture, it is quite impossible by traction, or any other method of manipulation, to secure satisfactory reduction. For such cases, open reduction is the proper procedure.

Without making elaborate subdivisions of the types of fractures, I shall merely take up the main groups, simple, compound and comminuted with the methods of handling which, experience has taught, are the most efficient and satisfactory to patient and surgeon alike.

In recent cases of simple fracture it should not always be necessary to resort to open reduction. This type can sometimes be corrected by making use of the Thomas splint bent so that the knee joint is flexed to an

* Read before the fifty-eighth annual meeting of the West Virginia State Medical Association at Bluefield, W. Va., on Thursday, June 11, 1925.

angle of 60 degrees. The result will depend on the amount of traction and countertraction that is able to be applied, and upon the presence or absence of soft tissues interposed between the fragments. Straight Thomas splints can be used after the fragments are capable of maintaining their position. Traction can be obtained by use of tape applied to the skin at the level of the fracture, or by use of calipers applied to the condyle of the femur. By means of Pearson's pressure pads to the side bars of the splint, any tendency to sidewise displacement can be corrected. Although there is danger of infection from use of calipers, the infection is never of a serious nature if the calipers have been introduced under rigid asepsis.

The femur affords the most important example of a bone which is liable to non-union from displacement. Such displacement is brought about by traction of the great muscles of the hip and thigh. I am fully convinced that the natural and easy method of preventing this is to treat the leg throughout at a position of natural and physiological rest in which the thigh is flexed and abducted and the knee is flexed. This position naturally brings into line the forwardly tilted upper fragment and the backwardly tilted lower fragment.

The surgeon who is presented with a compound fracture, especially the comminuted type, has a much more serious problem with which to deal. When the trauma consists of a small wound, a local or superficial debridement is usually all that is necessary, while in those in which there is a large wound of the soft parts, an early and thorough debridement of all of the devitalized tissues at the earliest opportunity is indicated. In most cases it will be found best to excise all damaged tissue, but care should be taken not to excise too much. Unless we are conservative, we are likely to be too extensive in our debridement.

Always supposing that free drainage has been secured with the removal of dirt and septic foreign bodies, then the leaving of bone fragments in a comminuted fracture is the surest way of securing natural and rapid repair; whilst removal of these fragments is the surest way of producing an ununited fracture. I believe it is extremely rare for a piece of bone to be severed from all vascular supply by trauma, and I use the term loose fragment, as implying that a piece of bone is separated from the main shaft but not from the organically connected soft parts. I have no belief in the value of a piece of bone separated from its blood supply as an agent of repair in an infected wound, and if such separation is beyond all doubt, then surely the fragment is better away from an infected wound.

This mechanical sterilization should in most cases be followed by chemical sterilization—as with Carrell-Dakin solution, or better five-tenths per cent sodium hypochlorite applied by Carrell's method—and the wound be permitted to heal by granulation. Primary suture in femur fracture should be practiced only by those of great experience and judgment, and when the patient can be under close observation of the operator. . . . . Satisfactory alignment can usually be secured by traction and proper splinting, so that internal fixation is only to be used where expectant treatment has failed. The best present practice is away from the use of any internal fixation apparatus in extensive comminuted fracture of the femoral shaft. The use of plates or screws is contraindicated except in those cases where "the comminuted particles can be removed and 50 per cent of the circumference of the fractured ends brought into close approximation." In a long spiral or oblique fracture, the fragments may be transfixed by one or two machine tap screws, but no plate should be used as a rule. Exceptionally, a plate may be put on, and the wound left wide open and kept upon Carrell treatment. Under such circumstances the plate is taken out after the lapse of twenty-five days, and healing by granulation permitted to take place.

I will outline briefly the plan of treatment adopted at our hospital on all of our femur cases:

(*1*) On admission to hospital the general condition of patient is determined as to the

presence or absence of shock. If shock is present, he is given the accepted treatment such as, external heat, intravenous glucose, morphine, and repeated doses of adrenalin. The patient is not removed from the ambulatory splint until the state of shock is over.

(2) After the period of shock has passed, the injured limb is thoroughly cleaned over a large area adjacent to the seat of fracture—in order to detect slight areas of abrasion which may later become seat of infection. If any abrasions are present they are covered with sterile gauze.

(3) We definitely determine, by radiographic examination taken from an A. P. view, lateral view, and at any other angle necessary, the position of the fragments and the type of fracture we are dealing with.

(4) From a study of the radiographs, we determine the line of treatment that should be instituted. If we feel that the fracture is such that an open reduction is inevitable, we do not wait, but immediately decide upon open reduction, and so advise our patient. Then after a lapse of from seven to nine days the operation is performed. If the fracture is a simple one, and reduction can be hoped for by the use of the inclined Thomas splint, skin traction, ice tongs, or calipers, the patient is placed in some form of extension apparatus and reduction is attempted under an anesthetic. The patient is kept continually under observation and frequently observed under the fluroscope. As soon as sufficient callous formation is present, the patient is immediately put up and encouraged to use the limb and if necessary, a walking Thomas splint is applied.

(5) In the compound fractures, we are dealing with a different problem. In the fractures compounded from within and in the absence of any extensive trauma, a conservative debridement is performed. The fragments are placed in apposition with or without the use of a mechanical appliance, the wound is left open to granulate and the Carrell-Dakin method of treatment is instituted. In the comminuted compound cases we practice conservative debridement. No attempt is made to use any fixation material, plates, band, etc. In the oblique or transverse fractures, if the fragments are found to be in a vicious position at the time of debridement, we have no prejudices whatsoever against putting on the plate, leaving the wound wide open, and using the Carrell method at once. The plate is removed at the end of three or four weeks. We do not attempt to plate these cases until after a period of a week or ten days has passed. This allows the swelling to subside, minimizes the danger of hemorrhage at time of operation and increases the local resistance of tissue, thereby minimizing the possibilities of further infection. In the very vicious compound fractures, I feel sure that much is to be gained by delaying operation ten or twelve days. It is sometimes possible to attack the fracture at a point opposite the compound wound. In this case the operative wound is closed in the usual manner and the original compound wound is not contaminated and is allowed to close by granulation.

To recapitulate—determine at the onset from intensive study of the radiographs the type of fractures you have and the line of treatment that will be best suited to patient and surgeon alike to secure a speedy and satisfactory result. If open reduction appears inevitable—do not wait for the "golden opportunity" to pass, but after a lapse of seven to ten days operate. At this period fibrous union will be absent, the local resistance of the tissues will be better and the shock to the patient will be at a minimum. Procrastination, when open reductions are inevitable, is detrimental to patient and surgeon alike. In compound fractures allow me to repeat my warning against too radical a debridement and of the danger of primary suture of the compound wound. These wounds will completely close by granulation by the time bony union is complete. Beware of the vicious comminuted fractures, and as to open reduction and the use of mechanical appliances in this type—the policy of "noli-me-tangere" should be the rule. Closed reduction with extension will give satisfactory results. Getting the patient out of bed at the earliest opportunity, and protecting the fracture with

the aid of a walking caliper splint, will aid in improving the general nutrition of the system and hasten convalescence. Remember that free play to the knee joint is imperative from the outset and unless we keep this in mind we will send patients out with an ankylosed knee far worse than the original fracture. Finally in closing let me emphasize the importance of frequent observation of the fracture by use of the radiograph so as to detect any malposition and keep in touch with the amount of union that is present at all times.

REFERENCES

ABBOT, LeRoy C.—Fractures of the femur. Arch. Surg., 9: 413, September 1924.

ESTES, W. L.—The treatment of fractures, Inter. J. Surg. Pub. Co., New York, 1900.

METCALF, C. R.—Fractures of the femur: The application of war lessons to civil practice. Ann. Surg., 70: 603, November 1919.

PEARSON, M. G. and DRUMMOND, J.—Fracture femurs. London, Henry Frowde 1919.

SHERMAN, W. O'N.—Poor functional results in the treatment of fractures. Trans. A. M. A., Sect. Orth. Surg., p. 71, 1922.

Compound fractures of the femur and open fractures into joints. J. Bone and Joint Surg., 6: 344, April 1924.

SHIPLEY, A. M.—Report of one hundred and ninety fractures of the femur. J. Bone and Joint Surg., 6: 350, April 1924.

* * *

DISCUSSION

Dr. S. S. Gale of Roanoke, Va., opened the discussion by exhibiting slides showing methods of treating fractures, which he explained in detail.

Dr. JACOB LIVINGSTONE, Welch:

Dr. Gale's slides have been very interesting, and show the transition from the treatment of fractures years ago to how we treat them now. Dr. Rutherford's paper was very interesting and very instructive. I have had the good fortune of working with Dr. Rutherford, and I share his views. There are a few points I should like to emphasize. First of all, every case of fracture of the femur is a problem of its own, and the treatment should be individual. No routine treatment can be carried out in reduction of these fractures. When we do the open operation for reduction of fracture of the femur we have our motor saw out, we have our plates out, we have our screws out, we have everything out. We never know what we are going to do until we cut down on the fracture.

The question of open reduction and closed reduction has been a nightmare in bone surgery. Personally, I hold to the belief that the majority of fractures of the femur should be reduced by the open method. However, I do not think the open method should be used if good functional results can be obtained by closed reduction. The functional result in one individual may not be a good functional result for another. For example, you may get a hundred per cent functional result in an industrial worker, whereas for a track man it would not be a good functional result. Therefore the occupation of the individual should be taken into consideration.

Dr. Rutherford has taken up the question of removing plates in compound fracture. I believe, as he does, that all plates should be removed in a compound fracture in three or four weeks, but in simple fracture I do not think it is nesessary to remove a clean, innocent plate in a clean wound.

I am sorry to disagree with Dr. Gale in regard to primary suture in compound fractures. In order to do that one must do radical debridement, and in order to do radical debridement one must cut away important tissues, which will result in deformity.

The paramount idea in the treatment of all fractures is to be broad and adopt one of the many methods we have which will give good results for the patient and result in economic gain to the patient, his family, and his employer.

Dr. R. H. WALKER, Charleston, W. Va.:

There are certain things connected with the use of caliper traction which should be spoken of. One of them is the danger of infection. We are practically creating an open wound by sticking those ice tongs in there. I have seen two cases in which there was an osteomyelitis. These had to have secondary operations. Another thing is the pain.

Then, again, you will have noticed in the pictures put on the screen that the caliper traction was put down close to the condyles. This perhaps will result in ankylosis. In many cases there is no shortening, but there will be partial or complete ankylosis. Some men say they do not get it, but I know they do get it. I am in position to know, because I see the cases, and I know whereof I speak.

Dr. GALE, closing the discussion:

I want to say just one word about the pain connected with the ice tongs' traction. The little stunt in avoiding the pain is to incise the skin far enough below so that there will be no pull on the skin. Most of the pain they get is from the pull of the tongs on the skin, and if you slit the skin you can avoid that. As to ankylosis, one of the advantages of the ice tong traction is that it avoids ankylosis. The limb is exposed all the time, and you can start exercise early. So far I have had no trouble with infection. If you do have infection, it will be simple and easily taken care of. One point to which Dr. Walker referred is the danger of putting the ice tongs in the joints. That will not occur if you use care in putting them on.

THE CLINICAL SIGNIFICANCE OF CONVULSIVE SEIZURES*

By HANSON S. OGILVIE, M. D.
Charleston, West Virginia

CONVULSIVE seizures occur at one time or another in more than a hundred different pathological states. They may be of a various etiology: infectious, toxico-chemical, organic, reflex, psychic, or compensatory. Fortunately, the greater number of these are associated with or dependent upon some known disease and are readily recognized. There is a large group, however, that continue to be serious medical problems and which are doubtless dependent upon many etiologic factors with which we are as yet unfamiliar. Prominent are the convulsive seizures that developments of recent years have traced to disturbances of the glands of internal secretions. We were more or less familiar with the attacks occurring in some instances of frank and advanced pituitary or thyroid dysfunction, and in Addison's disease, but a broader conception of the interdependency of the endocrines as a whole has brought with it the recognition of symptoms, rarely dependent upon one individual gland disturbance, but to a deficiency more or less of the entire system. One of these is mild, and sometimes severe, motor phenomena occurring with or without loss of consciousness.

Any consideration of the subject first requires a clear conception of the physiological and pathological changes immediately responsible for a convulsion, and a reminder of the physical setting in which the phenomena originates. Because of the retaining effect of the skull and the consequent limitations placed on vascular dilation and response, any disorder, local or bodily, which directly or indirectly brings about excessive congestion or anemia of the brain may cause injury, not only from mechanical pressure and interference with the delicate sensory and motor mechanisms, but also from toxins normally or pathologically present in the blood stream, which, by reason of increased pressure and greater concentration find more ready access and are more damaging to these parts.

Deficient oxygenation of the brain cells, as in asphyxia from any cause, or the injury to

* Read before the Raleigh County Medical Society at Beckley, W. Va., October 15, 1925.

them from toxins of any kind, may be the exciting factors, but in any event the vasomotor balance will ultimately be so stressed in the manner above mentioned as to impair its function. When this occurs, the reflex inhibitory centres and pathways, which direct and control the normal energy output, are subdued or suspended, and the resulting motor discharge of a convulsion ensues.

In some adults, notably those with an inherited predisposition, and always in children, this inhibitory control is poorly developed, and accounts for their peculiar susceptibility to seizures upon slight provocation. This is exemplified in the convulsion occasionally induced in some individuals when subjected to pain, such as dressing a bad wound, lancing a boil, or suturing the skin. Their inhibitory control, in short their cerebral stability and vaso-motor balance, is inadequate and fails to withstand the shock.

The frequency with which convulsive seizures usher in acute infectious diseases, particularly in children, where they also tend to occur as reflex phenomena in dentition, adherent prepuce, worms, etc., is significant, and worthy of careful consideration from a prophylactic standpoint. Epilepsy has properly been said to be due to the circumstances to which the first attack was due. It is the end result in one out of every eight cases of infantile convulsions from whatever cause, and Osler has stated that fully 50 per cent of infantile hemiplegias are directly due to them. The infant's brain grows more rapidly during the first year than in all later life, and while the nerve cells are capable of generating force, its control of them is deficient. So sensitive are the delicate inhibitory control centres in the child, that once injured, from toxins, excessive congestion, prenatal, birth, or postnatal trauma, they not infrequently fail permanently of adjustment and become easy prey to trivial irritations that would normally be resisted. As a preventive measure therefore, we should direct our attention particularly to maintaining a well balanced vaso-motor control whenever a predisposition, either hereditary, or acquired by a convulsion of an infectious disease, is present, and to avoiding in every possible way injury to the brain even of the slightest nature.

In many instances it is essential to a clear and logical interpretation of the basic disorder that the distinguishing characteristics of a convulsion, if any, be recognized.

Perhaps the most familiar cause of attacks in adults is epilepsy, and while its cardinal features are well known and at first thought elementary, it is not infrequently mistaken for the seizures that occur in psychasthenia and allied conditions. This was strikingly illustrated in the late war when through neuro-psychiatric examinations very often revealed the fact that many cases traceable to shock, fear, or slight trauma, had been labelled epilepsy and no further consideration given them save the administration of time-worn sedatives. So common were seizures of this kind that the term "convulsive habit" became a part of every neuro-psychiatrist's vocabularly. Epilepsy, while a clear cut syndrome when well established, is essentially merely a symptom of some grave hereditary bio-chemical, or circulatory disturbance in the first instance. It becomes a clinical entity only when its underlying cause is not recognized and, permitted to become firmly intrenched, then it expresses itself in terms of periodic convulsive seizures.

The attacks occurring in psychasthenic states vary greatly both as to degree and frequency. They often have many of the characteristics of both epilepsy and hysteria, and are, in fact, closely allied to the latter. They differ from hysteria, however, in that they are essentially exhaustive psychosese occurring more frequently in men than in women, and in the truest form not necessarily dependent upon any hereditary predisposition. This condition is primarily a state of extreme fatigue of the mental faculties resulting from excessive indulgences of any kind, overwork, worry, anxiety, fear, etc., and the stigmata of hysteria, if present at all, are comparatively slight. Seizures in this condition are frequently precipitated by some intense mental activity. They differ from epilepsy chiefly in that the clonic

spasms are not so marked or characteristic, the tongue is seldom bitten, and the sphincters usually not affected. There is no cyanosis as a rule, but instead a distinct pallor. The attack is shorter and while there is marked weakness and depression following, there is no distinct drowsiness.

Hysterical seizures are of great importance from a diagnostic point of view because they are too frequently confused in one way or another with other conditions, particularly malingering, an error which, though a natural one, is capable of infinite injustice and harm. A word as to the nature of hysteria may not be out of place. Here we have a very real clinical entity. It may be said to be a severance of some mental process from the main personal consciousness, which, running amuck, so to speak, manifests itself wherever and however it can find a line of least resistance; in the motor or sensory pathways, or in the conduct and behavior of the individual. As a convulsive seizure, or as any other pathological phenomena, it closely simulates other mental or organic diseases because it uses the same channels of expression. But in this instance it differs from epilepsy and other convulsive seizures in the following main particulars. First, the disease is twenty times more common in women than in men, whereas epilepsy is slightly more prevalent in men; 53 per cent as against 47 per cent. Hysterical convulsive seizures are usually, though not always, gradual in onset, and are ushered in, or preceded by, some form of emotional disturbance, or shock, or by malaise, vague paresthesiae, choking sensations, etc. Unconsciousness is not always complete, and slapping of the face or the application of cold water will frequently alter or terminate the attack. The pupils are usually not dilated. They are not insensitive to light and the eyes are not fixed in any one position but tend to roll from side to side, or from one object to another. There is no initiating tonic spasm with cyanosis, as in epilepsy, but a struggling of the entire body with purposeless throwing about of the arms and legs and alternating rigidity and relaxation of the whole body. During the tonic intervals the eyes are tightly closed and the fists firmly clenched with the thumbs folded in the palm. Opisthotonus is commonly seen in this stage. As the attack subsides, there is often a coarse tremor of the body, the face is usually flushed and the patient not infrequently cries out or talks in an incoherent manner. The cheeks, lips and hands are often bitten during the seizure but never the tongue. The sphincters are very seldom affected except in those who are greatly weakened physically from disease or intoxication. There is no mental deterioration in hysteria and the periods between the attacks are characterized by unusual mental alertness and emotional tone. Instead of feeling badly after the attack the patient usually feels better, as if she had purged herself of some torturing mental complex, which, indeed is usually the case. The fact that attacks seldom, if ever, occur when the patient is alone and a fall might cause injury, is due to the fact that the presence of other people, and their attitude towards the patient, are the real exciting stimuli for precipitating the situation, and not necessarily to a desire on the part of the victim to deliberately stage it for effect. The symptoms and signs enumerated above are by no means present in every case. Because they are of such a character as to suggest imitating malingering it does not always follow that the patient has conscious control over them.

True hysteria is a comparatively rare disorder, but *hysteroid* tendencies not infrequently enter into a clinical picture. Not to recognize the extent to which they play a part in a given case often results in mismanagement and failure. In the average case there is nearly always some definite anotomical as well as psychical basis. These are referable in one way or another to the reproductive instinct, and to the organs and adnexa that serve to fulfill this function. Particularly is this true in pelvic disorders of women and young girls and accounts for its great predominance in the female sex. But in the presence of cerebral instability with bodily weakness from any cause, convulsive seizures of the hysteroid kind may occur, and it is not always an easy matter in such cases to differentiate.

Convulsive seizures that are due to increased intracranial pressure from certain types of brain injury, neoplasms, abscess of the brain, meningitis, hydrocephalus, etc., seldom present much difficulty of recognition since concomitant signs and symptoms are usually present. It should be remembered, however, that a brain tumor, for instance, may exist for two years or longer without giving any evidence of its presence other than attacks practically identical with those of idiopathic epilepsy. It is therefore important to be on the lookout for changes in the reflexes, sensory changes, ocular or other cranial nerve palsies, or muscular weaknesses, preceding or following the seizure. Or the only suggestive phenomena may be simply a brief tingling, twitching, or a numb sensation in some particular part; e. g., a thumb, or a toe. Headache or slight dizziness may be complained of for a period of hours, or even days, beforehand. Careful observation will usually reveal the fact that the clinic twitchings of epilepsy are not uniformly present, but instead, the spasms are more of a remittant tonic type from the start, and not infrequently travel from one group of muscles to another along a definite course. This involvement may take place so rapidly as to escape notice unless the observer is keenly attentive. I have in my files the record of a case, seen at the Vanderbilt Clinic in New York several years ago, of cortical tumor of the right face centre area in which, for more than two years, the only manifestation was epileptoid seizures. A tumor was suspected by one of us only when it was reported that the attacks were being ushered in by a slight momentary quivering of the left eyelid. This gradually spread, over a period of six months, to involve the entire side of the face, but it was then fully another six months before signs of intracranial pressure developed.

As a rule, however, seizures due to neoplasms in the cortical or subcortical areas or pathways, are frankly Jacksonian in type, but it must also be remembered that other conditions, such as uremia, diabetes, general paresis, multiple sclerosis, and syphilitic or tuberculous menengitis, not infrequently produce attacks involving one side, or even one extremity, more than another, and for this reason be mistaken for tumor. Any Jacksonian attack occurring without signs of intracranial pressure should at once suggest the presence of one of the diseases. In the case of a menengitis at the base, however, we may have Jacksonian attacks, and increased intracranial pressure symptoms as well. In such cases it is frequently impossible to differentiate from a neoplasm without an analysis of the cerebro-spinal fluid. At this point it may not be out of place to refer to the danger attendant upon lumbar puncture in cases of intracranial diseases, particularly tumors. There is no procedure that nets such valuable information in organic neurology as spinal fluid findings, and no therapeutic measure more valuable in preventing damage to the brain in injuries with intracranial hypertension, as the withdrawal of fluid by lumbar puncture. Under ordinary circumstances it is without serious hazard, but the step should first always have careful thought and consideration. In one of my own cases, some years ago, death followed a few hours after lumbar puncture in a woman who had been having attacks of unconsciousness for more than a year, apparently without any signs of organic disease of the brain of any kind. Autopsy showed a tumor in the right frontal lobe as large as a walnut. Such intracranial pressure as had been present was probably not sufficient to give the signs ordinarily looked for, yet when interfered with, it was in all likelihood sufficient to let the brain-stem down on the edges of the foramen magnum and cause death. In this case we made the mistake of not observing the case long enough, and in inaccurately interpreting the manometer reading. Whenever the pressure is as high as sixteen millimeters of mercury in suspected tumor, great precaution is indicated, and not more than five cubic centimeters of fluid should be removed. In injuries to the brain with signs of intracranial pressure, however, the situation is reversed, and convulsive seizures and other symptoms are often relieved in a most striking manner. Limited amounts of spinal fluid may be removed in some cases as often as

every six to ten hours with benefit when the pressure remains as high as sixteen or eighteen millimeters.

In lesions of the cerebellum the so-called "cerebellar fits" are observed. These are quite characteristic and are seen more frequently in children. Here the onset is usually quite sudden and rarely with any warning. The spasms are almost always of the tonic type throughout. If the lesion is centrally located the head is retracted, the back arched, and the elbows flexed. There is rigid extension of the legs and pointing of the toes. If there is any difference in degree in the tonicity of the two sides, it will be more marked on the side of the lesion, where the lower limbs are adducted, while on the contralateral side they are abducted. If the attacks tend to simulate epilepsy, which they sometimes do, there will almost always be signs of intracranial pressure from the beginning.

In spurious hydrocephalus, due to marantic thrombosis of cerebral foramina, or to ventricular hemorrhage, we not infrequently see convulsive seizures, but there is an accompanying drowsiness, or coma, with unilateral or bilateral puffiness of the eyelids and face.

Considerable importance should be attached to the fact that a convulsion, generalized or local is frequently the initial symptom of general paresis or cerebro-spinal syphilis. They may even persist over a period of two or three years, as in brain tumor, before other signs or symptoms appear. Frequently there is no history of syphilis, and the blood serum may be negative to the Wasserman test. I have seen this occur in a married woman who had contracted the disease from her husband, (apparently cured for ten years), and who had no other manifestations of it. In such cases the spinal fluid will be found positive, as a rule strongly so in all four phases. Disturbances of the deep reflexes and abnormalities in the pupillary margins and light reflexes are usually present before or after the attack.

Convulsive seizures may occur in cerebral arterio-sclerosis as precursors of an apoplexiform attack. The radial blood pressure need not be alarmingly high in such cases. As a rule the Jacksonian type predominates, frequently indicating in a measure the location of the impending cerebral damage and later verifying it by intensified seizures of this kind after the attack. Sclerosis of the cerebral vessels is more common than is ordinarily supposed. Convulsive seizures occuring around middle life, with syphilis and lead poisoning eliminated, should always excite suspicion. Particularly is this true in the presence of severe frontal headaches that are promptly relieved by the nitrites, or dizziness with neurasthenic symptoms.

In Stokes-Adams disease, seizures sometimes occur but they are usually preceded by attacks of syncope, and other evidences of circulatory disturbance, a slow ventricular beat with rapid auricular contractions as found in the pulse of cervical veins. They occur well past middle life as a rule and only when the heart block is complete. The attack is often quite characteristic in that there is at first a twitching of the facial muscles, which gradually extend to involve in turn, those of the neck, arms, trunk and legs.

Convulsions of the puerperal state are not always eclampsic in nature. They may be the first evidence of intracranial disease as above cited, or they may be due to the inherent failure of the patient's inhibitory control when subjected to the pains of labor or to excitement or fatigue during gestation. Seizures identical with those of Tetany, are sometimes seen during pregnancy or lactation, and are probably due to calcium deficiency in the blood from disease or extirpation of the parathyroids. In such cases the attacks very closely simulate those of hysteria and may be easily mistaken for them. The characteristic stigmata, however, are absent, and consciousness is lost in only about 25 per cent of the cases. In true Tetany of childhood the tonic spasms may shift from one group of muscles to another sometimes producing rather rythmic movements, and are accompanied by more or less pain. The hands and feet are thrown into characteristic postures; the fingers of the former

assuming a conical shape with the thumb flexed underneath. The toes are sharply flexed, the soles inverted and the ankles dorso-flexed. These positions not infrequently persist during sleep. Pressure on a nerve trunk will excite a typical spasm. Tetany has been observed as a grave terminal symptom of acute dilitation of the stomach.

The convulsions of *rabies* are usually accompanied by marked mental excitement, the patient remaining conscious as a rule. Tonic spasms of the muscles of deglutation are induced by attempts to swallow liquids, and by other stimuli, such as bright light, noises, etc. These spasms rapidly spread to other muscles of the body, chiefly those of respiration, and opisthotonus is common. Hydrophobia may be closely simulated by hysterical patients who have been bitten by a non-rabid dog, but the respiratory spasms are lacking. It may be worth while to note here that rabic convulsions may not appear for a year or longer after exposure, and cases are on record that could be traced to a scratch so slight as to be only faintly recalled by the patient.

Tetanus will cause practically the same type of convulsion as strychnine poisoning except that there is no initiating clonic spasm and there is the characteristic locking of the jaws and facial expression which are absent in the latter. There are recurrent tonic spasms in both these conditions but in strychnine poisoning there is complete relaxation during the intermissions which does not occur in Tetanus. Both are characterized by very rapid heart and respiratory movements but they are more pronounced in strychnine poisoning. Consciousness is not lost in the latter condition, and the tonic spasms will occur again and again with increasing severity. Opisthotonus is common to both but is distinctly characteristic of strychnine poisoning.

While seizures due to lead poisoning are usually characterized by the blue line on the gums, it is sometimes so faint as to escape notice in individuals who are very susceptible. In two cases at the Neurological Institute we traced convulsive seizures to this condition when no lead lines could be demonstrated at all, but were able to find quantities of the metal in the urine.

In acute alcoholism the seizure is not characteristic in itself. It usually more closely resembles epilepsy than any other disease, and in fact, is the exciting cause of this condition in a large percentage of cases. It is important to remember that epileptoid convulsive seizures not infrequently follow the sudden withdrawal of alcohol from inebriates. There is always a certain amount of cerebral oedema in these chronic cases and their liquor should be taken away gradually in order to avoid any sudden vaso-motor collapse. Chronic alcoholism is very often the predisposing as well as the exciting cause of hysteria, particularly in women, and it is sometimes difficult to determine where one terminates and the other begins.

Time will not permit of more than a reference to the convulsive seizures associated with the acute infectious diseases of the central nervous system proper, and numerous other conditions in which they are encountered. They are not peculiarly characteristic in the beginning, but if they tend to involve the meninges, or the interstitial structures of the brain with scar tissue, they may leave in their wake periodic attacks of the Jacksonian type, or produce signs of intracranial hypertension if the residuum affects the base. It should constantly be borne in mind that a convulsion is always a dangerous symptom, not alone as regards the immediate consequences but by reason of its tendency to cause permanent damage. In several of these conditions much can be accomplished in relieving the acute convulsive symptoms, and in preventing their sequelae, by careful drainage of the spinal canal.

UROLOGY FROM A GENERAL PRACTITIONER'S STANDPOINT*

By LAWRENCE T. PRICE, M. D.
Richmond, Va.

A GOOD many patients have come to me for urological examination in whom it has seemed probable that a tentative or complete diagnosis could have been made by the family doctor, with proper use of the methods and information at his command. The object of this paper is to emphasize the value of some of these simple methods, and also to call attention to the fact that a careful history combined with local examination, may bring out many facts which would ordinarily be overlooked.

That it is to the interest of the general practitioner to obtain as much information as possible towards the diagnosis of these cases will be readily admitted. If his diagnosis is positive, it may be possible for him to institute his own treatment and thus save his patient the time and expense of a journey to a specialist. If his diagnosis is tentative, he may direct his case intelligently and the more information he can give his patient as to the nature of the trouble the greater is apt to be the respect accorded to his knowledge.

Many of the points brought out are not new and some of them have been included in the course at medical schools. The seeming unfamiliarity on the part of many members of the general profession with certain essential urological facts has been deemed sufficient justification for discussing the subject in some detail.

It should be remembered that a discharge from the meatus of the urethra is not always gonorrhea, that every case of frequent and painful urination is not due to cystitis, and that a hematuria may originate elsewhere than in the kidney. Subjective and objective symptoms apparently of serious import may be due to some simple condition which can be easily relieved.

On the first examination of a patient presenting urological symptoms, it is of primary importance to have a careful and detailed history, as it is only in this way that a clear conception of the case may be obtained. Information should be elicited as to the following details: (1) time and circumstances of first symptoms, (2) predisposing causes, (3) history of traumatism, (4) previous attacks of similar nature, (5) treatment already instituted. The patient's own idea as to the nature of his trouble should be noted, but the physician should draw conclusions only after painstaking interrogation followed by careful physical examination. For instance, a patient may present himself for treatment for a case of gonorrhea and his own observation of his malady may seem to corroborate the diagnosis; the presence of a balano-postitis or a chancre or chancroid of the meatus or urethra may be the cause of the purulent discharge. If the first condition be present, the pus, together with inability to retract the prepuce, and the history of omission of bathing for several days will establish the diagnosis without the aid of a microscope. If a chancre be present, the diagnosis may be established by the time of incubation together with the presence of a localized area of induration. The period of incubation in chancroid is the same as in gonorrhea, but the character of the discharge is different, and palpitation will reveal an infiltration which does not occur in chancre. It may be noted, however, that it has been my experience to observe the appearance of a chancre

* Read before the Raleigh County Medical Society, Beckley, W. Va., October 15, 1925.

of the meatus during the treatment of a gonorrhea. This observation was fortunate for the patient, in that treatment for the specific condition was begun at an unusally early period of the disease.

A patient with an apparent gonorrhea may have instead, an aseptic urethritis or a non-specific urethritis. Here the history of exposure to infection, excessive use of alcohol or sexual over-indulgence is very helpful in establishing the diagnosis. It should be mentioned that the use of the microscope is more definitely conclusive in differentiating these latter conditions than the history alone, as it will demonstrate the presence of gonococci in the discharge, the presence of microorganisms other than gonococci, or the absence of bacteria.

The prostatic urethra, the verumontanum and the neck of the bladder contain highly developed sensory nerve terminals in their mucous membrane and are very vascular. These localities, therefore, are extremely sensitive and may present symptoms due to causes more or less remote. For example, a pyogenic infection in the kidney pelvis will produce a secondary infection with symptoms at the bladder neck; there being no subjective evidence to indicate the location of the primary lesion. The bladder acts as a reservoir, giving an opportunity to the organisms to attack the tissues.

In the urological examination of male patients I use the Thompson three glass test, as a routine measure. For this simple test the conical urine sedimentation glass is desirable and may be obtained at any drug store. Ordinary drinking glasses or white glass bottles may be used, however. The patient voids the entire bladder contents into the three glasses, making the amounts as nearly equal as possible. Glass number one represents the first urine, glass number two the middle urine, and glass number three the last.

In an acute gonorrhea, the urethra is washed clean by the first urine, therefore, the first glass will be cloudy and the second and third clear. In chronic anterior-posterior gonorrhea and prostatic infections, the first glass will be cloudy, the second clear, and the third cloudy. This is because the pus from the urethra appears in the first urine, while at the end of urination the perineal muscles contract, causing expulsion of the infected contents of the prostrate and vesicles with resulting cloudiness of the third glass. In the presence of a vesical calculus causing bladder infection, the first and second glasses will be relatively clear and the third cloudy or bloody, owing to the fact that by sedimentation the blood or pus has accumulated in the lowest part of the bladder. In kidney infections the infectious products have become thoroughly mixed with the urine so that all three glasses will appear cloudy.

Three cases will be cited to illustrate the value of the above test.

Case 1. Patient sent for examination on account of the presence of hematuria. The doctor who referred the case wrote a letter indicating his belief that a pathological condition of the kidney was present. The three glass test showed almost pure blood in the first glass, second and third clear. Urethroscopic examination revealed a very vascular papilloma in the pendulous urethra, which was removed by cauterization. The hematuria immediately came to an end.

Case 2. Patient referred for a protracted and obstinate case of gonorrhea with continued meatal discharge. All three glasses very cloudy. Enormous amount of pus and many bacteria found under microscope. Cystoscopic examination with ureteral catheterization revealed marked unilateral pyelitis.

Case 3. A patient came under my observation with the following history: Five years before he had a swelling of one epididymis with apparent abscess formation. A diagnosis of tuberculosis of the epididymis and testicle was made by a surgeon whom he consulted, and a radical operation was done for removal of the offending organs. Three years later a similar condition developed on the opposite side and the remaining testicle and epididymis were removed by a second surgeon. At the time I saw him, all three glasses of the voided urine were cloudy,

which caused the opinion that a kidney lesion was present. Cystoscopic examination revealed a well developed tuberculous infection of one kidney and of the bladder. If this simple test had been done at onset and the obvious deduction made, a complete urological examination would have revealed the primary condition and the double castration would possibly have been avoided. At least, he might probably have been saved the second operation.

Urine which is cloudy in appearance does not necessarily contain pus. Alkaline urine may be heavy in phosphates, especially after the ingestion of albuminous food e. g., eggs or milk. A few drops of acetic acid will cause such urine to become perfectly clear. Phosphatic urine sometimes causes frequency of urination and burning, which may simulate a more serious condition. The internal administration of sodium acid phosphate will acidify the urine, it will become clear and the symptoms will come to an end.

As is well known, the old method of diagnosis of stone in the bladder was the attempt to elicit a grating sensation upon passage of a sound. This procedure seems to have been forgotten or neglected, as many cases referred for diagnosis turn out to be due to vesical calculus. A sound, passed with the bladder partly full of urine or water, should detect a stone unless it be encysted. This is not a difficult procedure in the hands of the general practitioner and the method possesses value. Of course, the size and number of stones can be determined only by cystoscopic or X-ray examination. Correct diagnosis of acute pain in the right side of the abdomen may be a most difficult problem, especially in the female. However, the ability to use a microscope and to make a blood count will enable one to form a fairly clear idea as to the possibility of a right renal or ureteral calculus being the cause of the symptoms. The absence of leucocytosis plus the characteristic urinary findings will be overwhelmingly in favor of the presence of a calculus, and the history and symptoms will, of course, be of value proportionate to the completeness of the clinical picture. A hypodermic of morphine administered at home may thus be the only immediate treatment necessary and the consideration of removal to a hospital for a possible emergency surgical operation will be eliminated. If the doctor himself is not equipped to do the microscopical work, he may in the present day often find a nearby physician or technician who can help him out.

Digital rectal examination will often establish a diagnosis of hypertrophied, adenomatous or malignant prostrate. Acute prostatitis or vesiculitis may likewise be discovered by this method. The hypertrophied or adenomatous prostrate is invariably symmetrical and its contour is smooth; it is not hard to the finger and not tender, but is distinctly dense. Acute prostatitis presents similar palpatory findings but is softer and extremely tender on pressure. A malignant prostrate may be normal in size or enlarged, and can be felt to be very hard and irregularly nodular. It is not usually symmetrical owing to unequal distribution of the involvement. There is no pain on pressure, as a rule. In vesiculitis, a soft nodular, fluctuating mass, very painful on pressure, may be made out adjacent to either of the upper corners of the prostrate. The latter may be normal or acutely inflamed. Massaged secretions from acute prostatitis or vesiculitis examined miscroscopically or culturally will show the character of the infection present and thus treatment will be indicated. Prostatitis and vesiculitis occur in the young and middle aged adult; hypertrophy and malignancy are seen in patients past middle age.

It is obvious that the points brought out in this paper have in no way been intended to cover the whole subject of urological diagnosis. Many cases will require cystoscopic or X-ray examination, or both, with special urinary and bacterial studies, to work them out satisfactorily. I would reiterate that my idea has been to be of assistance to the general practititioner by taking up some points believed to be of real value to him. It is hoped that this object has been to some extent fulfilled.

THE GASTROINTESTINAL HISTORY*

By WALTER E. VEST, A. B., M. D., F. A. C. P.
Huntington, W. Va.

IN any diagnostic problem presented for solution, one of the prime requisites is a good history. This is especially true when the patient complains of indigestion, for nowhere in the whole realm of medicine is an accurate painstaking history more of a necessity. In discussing this subject we shall consider briefly certain general points which may influence our conclusion and more at length the symptoms most often complained of and their probable significance. The latter may be divided into two classes: the general, or those referring to parts of the body other than the abdomen; and the local, or those referring definitely to the abdomen.

Under general considerations should be recorded age, sex, occupation, residence, history of past illnesses, injuries and operations, habits, and the constancy and duration of the indigestion. Age and sex may suggest gallstones for who does not remember the oft-quoted alliteration of the five f's—"fair, fat, forty, female, flatus?" The occupation may shed light on the true cause of abdominal symptoms for it would be an unpardonable blunder to do a laparotomy for lead colic. Past residence in the South should lead us to think of intestinal parasites, amebiasis, malaria, pellagra or sprue. The history of a malaria may be of value and that of typhoid or an initial lesion may be especially significant, and a past operation may mean adhesions. Habits should be gone into very thoroughly, especially regularity, the chewing habit, varieties of food, water-drinking, food intolerance, and the use of coffee, condiments, tobacco and alcohol. Seasonal variation is very suggestive of ulcer, and the duration of the symptoms may be of special value in differentiating between ulcer and cancer in patients past the meridian of life.

Of the general symptoms, the first we shall take up is headache, which is probably most often associated with constipation. However, the eye condition should always be inquired about because there is a headache—digestive syndrome dependent upon eye strain, which clears up after the patient has become adjusted to proper lenses. Moreover, there is a type of headache, usually frontal and often unilateral, due to food intolerance. Nausea is commonly an accompaniment and both symptoms are promptly relieved by vomiting the offending material or by gastric lavage. Constipation accentuates this type markedly. The "bilious headaches" are usually associated with a chronic cholecystitis or a focal infection elsewhere in the body. It is probable that typical migraine is most often dependent upon a chronic gall bladder, or a hepatic involvement. Somewhere in the literature I recently saw the statement that headache following the ingestion of alcohol depends upon liver insufficiency.

Many of these digestive unfortunates com-
of the idea that they are victims of organic
plain of cardiac palpitation and are obsessed
of the idea that they are victims of organic heart disease. This is usually seen in persons of the ptotic type, the so-called habitus enteropticus, and usually an actual gastroptosis is present. The eructation of gas, which commonly is present in these cases, affords a measure of relief. Care must be taken to exclude myocardial disease because indigestion may be an early sign of a failing heart

*Read before the Mercer County Medical Society, Bluefield, W. Va., October 2, 1925.

muscle in which instance there is usually present an enlargement of the liver.

Vertigo may be complained of and is usually associated with constipation, being really a result of intestinal autotoxemia, and when present careful aural, neurological and blood examinations are necessary; for dizziness may mean a diseased labyrinth, cerebrospinal pathology, or pernicious anemia.

Various skin manifestations may be dependent upon gastrointestinal dyscrasia. Jaundice should always be inquired about and especially should its recurrence be noted. Accompanying pain is very significant of gall stones. Chloasma, or liver spots, are usually dependent upon prolonged constipation associated with hepatic insufficiency. Urticaria, now generally believed to be an anaphylactic phenomenon, is most often a matter of food toxemia. Itching may be urticarial in origin, or it may mean either a high blood sugar level, or jaundice. Eczema is often a food sensitization and is commonly accentuated by constipation. The rash of pellagra is usually unmistakable. Prolonged sore mouth suggests sprue, pellagra or pernicious anemia, rarely chronic lymphatic leukemia.

Certain respiratory symptoms should always be inquired about. These are cough, expectoration, post-nasal drip, liability to colds and recurrent sore throats. Not infrequently is indigestion the chief complaint in incipient pulmonary tuberculosis and every now and then gastrointestinal symptoms are dependent upon a focus of infection in the upper respiratory tract, especially chronic tonsils.

Weight loss, pallor and weakness should be considered together. They depend upon lack of assimilation and anemia, and may mean ulcer, cancer, tuberculosis, pernicious anemia, pellagra, or sprue.

Certain urinary symptoms may be of importance for fairly often gastrointestinal symptoms are indicative of renal pathology; hence we should always inquire about frequency, burning, dribbling, incontinence and hematuria. Polyuria suggests diabetes. Urine of a dark amber color may precede jaundice and when this is the case gives a positive bile test.

Of the local symptoms, the first we shall consider is pain, which is usually described, dependent upon location, as epigastric, umbilical, or right or left upper or lower quadrant as the case may be. The character, constancy and duration should be noted; and especially the radiations. The upper abdomen has been called the area of abdominal romance and this description applies very aptly to pain in this region. Epigastric pain may be due to cancer, either gastric or pancreatic, ulcer, pylorospasm, gall stones, radiation of angina, aneuryism, tabes, syphilis, epigastric hernia, vertebral disease, or pancreatitis. The pain of cancer is often boring, is usually more or less constant and may be only a late development. That of ulcer, is usually seasonal, comes on at a definite interval after the ingestion of food, and may be most marked at night. Ordinarily it is relieved by taking food or alkalis. Gall stones pain is more likely to be in the right upper quadrant just beneath the costal margin and usually radiates backward to the scapula, less often to the right shoulder. Moreover, it is often induced by certain foods, and is colicky and often very severe. Angina pectoris radiates to the left shoulder and arm, but may be limited to the upper abdomen. It is usually very severe, fleeting, and accompanied by a sensation of impending death. Violent sudden upper abdominal pain accompanied by shock may result from a perforated ulcer or an acute pancreatitis. The girdle pains of tabes are usually so characteristic as to be unmistakable, and the patient's pupils are generally involved. Careful chest examination should always be done in acute upper abdominal pain as pneumonia or a diaphragmatic pleurisy may be the cause. In the right upper quadrant, pain may signify cancer of the liver, gall stones, acute cholecystitis, peptic ulcer or renal stone or block. Pain due to renal conditions, especially stone, usually radiates downward to the penis or testicle in the male, and to the vulvae in the female. In the left upper quadrant it may be renal, splenic, or colonic in origin. Pain in the region of the umbilicus is most often

due to hernia of that organ, or to appendicitis. It may be due to torsion of the omentum, or to mesenteric thrombosis. Right lower quadrant pain may result from appendicitis, caecal, ureteral, or pelvic disease. The same is true of the opposite quadrant, appendicitis excepted. Hemorrhoids may at times give pain in the lower quadrants and are very likely to be an accompaniment of gall stones. Cancer, diverticulitis, obstruction and tuberculosis may cause pain anywhere in the abdomen, dependent upon location. Diverticulitis, however, is probably most often left-sided. Tabes likewise is no respecter of localities. Beginning ischio-rectal abscess may similate very closely acute appendicitis. Discomfort, or distress, is only pain in a mild form, and is to be looked upon similarly. Heartburn is usually indicative of an excessive acidity and is commonly present in ulcer. It usually comes on when the stomach is empty and is relieved by taking food or alkalis.

Nausea and vomiting should be considered together. When present, they may mean almost anything and should be evaluated in the light of the remainder of the clinical picture. The character of the vomitus may be very significant, however. Hematemesis is most often significant of ulcer or cancer, but may direct attention to the liver. Remnants of food eaten more than six hours prior to vomiting usually spells gastric stasis and is most often seen in pyloric stricture due to ulcer or cancer. It may be present, however, in the atony of ptosis. Fecal material in the ejesta denotes obstruction, and excessively sour material an ulcer, or at least hyperchlorhydria. When vomiting without nausea is present, brain tumor should be excluded, and projectile vomiting is especially significant of this condition. When pain and nausea are both present, priority in onset should be determined for when pain precedes nausea the cause is much more likely to be surgical than when the reverse is true.

Dysphagia may mean esophageal stricture, either benign or malignant, or cardiospasm. In the latter condition, Smithies has recently emphasized the fact that solids are swallowed more readily than liquids.

Gaseous distension may be due to dietetic indiscretions, chronic cholecystitis, gall stones, hypochlorhydria, ptosis, constipation and gradually oncoming obstruction. Likewise it may occur in acute infectious diseases, notably typhoid and pneumonia. Eructations are usually present in gaseous distension. Food may also be eructated, and when this is the case, may mean a variation from the normal acid content. If this is high, the eructated material is sour and usually sets the teeth on edge. Explosive escape of gas from the stomach is most often a symptom of aerophagia and there are ordinarily other nervous manifestations present.

The appetite should always be inquired about, but its significance is variable, and, at best should be considered only suggestive. Loss of appetite is especially likely to be noted in early tuberculosis, gastric cancer, pernicious anemia, sprue and pellagra. Variable appetite is common in neurasthenia and ptosis. Ravenous appetite may be habitual or it may signify diabetes or intestinal parasites, usually tape worm. There is a variety of intermittent ravenous appetite associated with "bilious attacks' and preceding such attacks. Whether this phenomenon is a preliminary symptom or an exciting cause of the succeeding upset is questionable.

Diarrhea, constipation, and the characteristics of the stools we consider together as they all have to do with variations from the normal evacuations. The duration of a diarrhea is very significant. This symptom, when acute, often means only an error in diet, but it may usher in typhoid or dysentery. Prolonged morning diarrhea probably means sprue. The chronic type of diarrhea may be due to alcoholorhydria and is usually a symptom of pernicious anemia, and it sometimes is seen in pancreatic hypofunction. In these conditions it is likely to be more prevalent in the afternoon and evening. Alternating constipation and diarrhea suggests early tumor or the accumulation of a dense mass of faecal material in the intestine. It may be present in mucous colitis and in chronic colitis generally. Any prolonged diarrhea may be due to infectiou with ameba coli or cercomonas hominis and stool examination is

always indicated in suspected cases. Also, in a prolonged diarrhea, hyperthyroidism is to be considered.

In an acute febrile disease, blood in the stool signifies either typhoid or dysentery. In the former, the bleeding is more likely to be intermittent, or possibly limited to one large hemorrhage, while in dysentery blood is usually present in each stool, a large admixture of mucus is noted, and the passage of stools is frequent and is usually attended by violent griping pain. In tarry stools the blood originates high up in the digestive tract; but bright red blood comes from the rectum or anus and is far more often due to hemorrhoids than to any other cause. A marked amount of mucus usually is due to mucous colitis, especially if the mucous is in strands or casts. It is usually the latter type which show such marked nervous symptoms. Most often these patients are constipated; rarely there may be brief diarrheal periods alternating; and the act of defaecation is usually immediately preceded or accompanied by griping pain. Dense scybalous stools are found in certain types of constipation, especially that due to over-absorption from the colon. The well-known clay-colored stool is seen when there is not proper excretion of bile. Undigested particles of food may mean over-eating, insufficient chewing, achylia, or pancreatic hypofunction, and may be noted in pernicious anemia, pellagra or sprue. Grayish, mushy, foamy stools are characteristic of the latter condition and are evacuated during a period of morning diarrhea, numbering usually seven or eight passages. Constipation may be present in many conditions ranging from improper habits and intestinal atony to cancer. It is unquestionably one of the physical sins of our modern life—we use the term sin because it is so often dependent upon carelessness in habit and in these cases so readily overcome by constant attention to the detail of proper hygienic living. It may be associated with hyperchlorhydria, or any chronic inflammatory or obstructive lesion. Coming on gradually late in life, it is very suggestive of malignancy. We recently saw a case of constipation in which the act of defaecation was accompanied by nausea and usually by vomiting. The only pathology made out was a small diverticulum of the sigmoid. Operation was declined, and the patient has not returned. Constipation is such a commonplace, that it is likely to be regarded too lightly and we feel that, when present, careful gastroenterological examination is indicated.

In discussing the symptoms to be considered in a gastrointestinal history, we would not decry the physical, laboratory, and roentgenological examinations. On the contrary, we would urge them as well. But we do feel that there is too much of a tendency to shift the burden of diagnosis upon the laboratory and the X-ray, the "short cuts to diagnosis", deprecated by Miller in his Oration in Surgery here last June. These aids are very valuable but are limited. Too many physicians do not have access to them; but everybody can take a history and a good one at that. Only a moderate amount of time and a little trouble are necessary. Moreover, a very large percentage of people who consult a physician do so because of gastroenterological symptoms. It behooves each of us therefore to get at least a good history on all such presenting themselves.

FLUOROSCOPY AID IN DIAGNOSIS OF CANCER OF THE STOMACH

I have seen a number of cases in which the most careful abdominal palpitation failed to reveal any tumor, but on repeating the examination under the roentgen-ray screen, when the stomach was visualized, it has been possible to recognize a thickening where an irregularity in outline or an abnormality in peristalsis was observed; the method of combined radiography and palpation, which should be carried out by the clinician and not by the radiologist because of the necessary exposure of the hands to the rays, may, therefore, be of great value when neither method alone has led to any conclusive result.—Hurst, A. F.: *Guy's Hosp. Rep.* 75:402 (Oct.) 1925.—Abstract in *Journal A. M. A.*

INGUINAL HERNIA COMPLICATED BY HERNIA OF THE OVARIES AND TUBES*

(Report of a Case)

By W. N. ROWLEY, M. D.
Huntington, W. Va.

THE comparative rarity of inguinal hernia in the female infant stimulated the report of this case. Especially in view of the fact that certain unusual features were presented. The literature is not abundant with case reports in which the ovaries are found in the hernial sac, and particularly the finding of both ovaries and both tubes on a single side.

Hallopean and Colleville (1) report a case of left inguinal hernia in a two months old child. The sac contained a strangulated left tube and ovary. The vessels of the ovarian pedicle were thrombosed and it was necessary to remove the ovary and part of the tube. Torsion of the pedicle had produced strangulation. No mention was made of cyst formation in the ovary.

G. P. Muller (2) reports a case in a five months old child who had been previously operated on for acute strangulation of the ovary and tube in a left sided hernia. The tube and ovary of the left side were removed. Muller operated the right side four weeks after the first operation and found the right tube and ovary in the sac. No strangulation had occurred, as operation was promptly done following the appearance of a mass in the right inguinal region. The ovary and tube were replaced in the abdomen.

R. H. A. Whitelocke (3) reports a successful operation for strangulated hernia. The child had vomited for several days and was acutely ill at the time of operation. In the hernial sac were found the right ovary and tube together with a small loop of intestine. This last was severely strangulated and purple black, but shiny. The circulation was restored and the bowel replaced. The ovary and tube were replaced and repair of hernia completed.

These references in the literature are the only ones I have been able to obtain in which the condition occurred in infancy. Krug (4) writing in 1890, reports a case occurring in a girl 18 years of age, in which the diagnosis was made of inguinal hernia of the uterus, left tube and ovary. Krug states that his case was an exceedingly rare one and quotes from Englisch in *Stricker's Medizinische Jahrbucher*, H. 3, p. 335. This reference contained 30 collected cases of hernia of the ovary, of which 17 were congenital. Hernia containing the uterus with appendages are more rare. Pitha and Billroth ("Handb. d. Chir.," Bd. iii. 3 Lfg., p. 66), also quoted from Krug's article, state that hernia of the uterus has been diagnosed only in pregnancy. Also that in a few cases of hernia of the non-pregnant uterus, the organ was irreducible.

Duret, H. (5) reviews the literature pertaining to hernias of the ovary and quotes a case reported by Balleray in 1876 in a patient 37 years of age, in which the hernia was strangulated. Also a case reported by Raffo in 1881 in a patient 48 years old, who had presented a cystic ovary in the hernial sac. He also reports a case from Skanzoni in 1871, in which a hernia appeared following an injury, followed by a tumor in the left groin, which proved to be the uterus, and in which

* Read at the fifty-eighth annual meeting of the West Virginia State Medical Association at Bluefield, W. Va.

a pregnancy demanding interruption later occurred.

Boudaille, H. (6), writing in the French literature, reports a case of congenital hernia of the ovary in a patient 36 years old. His patient was operated on in 1874. He also quotes another case in which the patient was 42 years old. The condition had existed in this case for 18 years and the hernia with the ovary was resected.

These references carry the literature back as far as 1871. It is possible that some of the data in regard to cases of this kind has not been published.

The case I wish to report has certain features about it that are particularly interesting. The patient in this case is a female child, 81 days old at the time of operation. At birth the child was normal on postpartum examination, with the exception of a small mass in the right inguinal region. This mass was about the size of a hickory nut and was not reducible. It gave no apparent symptoms up until two days before operation.

The child was breast-fed, gained weight rapidly, but had been fretful for a week previous to operation. Because of this fretfulness the child had to be carried a great deal and when lying down cried almost constantly. There was no digestive disturbance.

Forty-eight hours before operation the mother noted a rather marked increase in the size of the mass, and on examination the mass had grown the size of a small hen's egg. It was acutely tender, with moderate edema of the skin over the mass. Attempts to reduce the contents of the sac failed, and after 12 hours' warm application the child was no better. Subsequent examination showed no improvement and at ten o'clock that evening, redness and increased swelling of the mass indicated the advisability of surgery.

The child was operated on, under ether anesthesia, through a small incision in the lower right inguinal region, and the sac was exposed. On incision into the sac, considerable fluid was found and the contents of the sac examined. The left ovary and tube and the right ovary and tube filled the sac. The left ovary was 3½ cm. in diameter on its long axis, and 2 cm. transverse diameter. The left tube was 6 cm. long, ½ cm. in diameter, edematous and reddened from a passive congestion. The right ovary was 2 cm. long and 1¾ cm. transverse diameter, and contained a small cyst ½ cm. in diameter. The right tube showed the same condition as the left. The fundus of the uterus was drawn down into the canal and did not occupy the sac. No intestinal content was in the sac, nor any omentum.

The diameter of the internal inguinal ring was 1¼ cm. It was necessary to puncture the cysts in both ovaries and to incise the internal ring in order to replace the contents of the sac into the abdominal cavity. The round ligament of the right side was congested. The round ligament of the left side was apparently overstretched. The hernial sac was closed by a purse-string suture close to the internal ring and amputated. The canal was then obliterated by the Andrews modification of the Bassani without transplantation of the round ligament.

The wound healed completely in seven days. The mother was allowed to take the child home on the third day, and at the present time—90 days post-operative—there has been no recurrence of the symptoms nor any appearance of failure of the repair. There is a slight relaxation of the inguinal ring on the left side.

The interesting features in this case are:

1. The presence of the left ovary and tube in a right hernial sac.

2. The cystic degeneration and edema of the ovary, which made the size unusual.

3. The absence of the intestine in the hernia.

4. The absence of any abnormalities in development of the genitalia.

It would seem from the findings in this case that the ovary of the left side probably occupied the hernial sac during intra-uterine life, with possibly the presence of the right

ovary also in the sac. The symptoms of pain were those due to traction on the broad ligaments, associated with increase in the intra-abdominal pressure. The associated edema of the adnexa produced by crying apparently caused the enlargement of the tissues within the sac as soon as the child was born and crying took place.

The literature, so far as I have been able to find, makes no note of the cystic degeneration of the ovaries found in similar cases. It would also seem more probable that we would find developmental abnormalities of the genital organs in a case where they have occupied the inguinal tract intra-uterine. I believe that early operation in inguinal hernias in the female child, when the mass is firm and not easily reducible or unreducible, is the method of choice. For in this case, had strangulation been allowed to occur, both ovaries might have had to be sacrificed, an unquestionable catastrophe.

BIBLIOGRAPHY

1. Hallopeau et Coleville: Hernia inguinal eganche contenant la trompe et le pedicle ovarique. Bull. et mem. Soc. anal. de Paris, 1920 XC, 336.

2. Muller, G. P.: Inguinal Hernia Complicated by Hernia of the Ovary and Tube, Ann. Surg., Phila., 1918, LXVII, 380.

3. Whitelocke, R. H .A.: Two Successful Cases of Operation for Strangulated Inguinal Hernia in Female Infants of the Ages of 22 and 17 days. Brit. J. Child. Dis., London, 1913, X, 353.

4. Krug, Florian: Congenital Inguinal Hernia of Uterus, Left Tube and Ovary. American Journal of Obstetrics, June, 1890.

5. Duret, H.: Des varieties rares de la hernia inguinale. Paris Thesis, 1883.

6. Boudaille, H.: Contribution a l'etude de la hernia inguinale congenitale chez la femme et des hernies de l'ovaire. Paris Thesis, 1891.

DISCUSSION

Dr. J. N. PRESTON, Roanoke, Va.:

Dr. Rowley is certainly to be congratulated on the way in which he has worked up this case, which is a rare case. It brings with it many lessons, I think, to men who are doing surgery. One thing is that you never know what you are going to get into when you get into the abdomen, even in cases apparently simple to begin with. I think one of the important things in this class of case is really the question that comes up in all hernias. Heretofore, at least until the last few years, most of us have considered hernias as of traumatic nature. Now we have pretty well concluded, or at least the evidence seems to show, that these hernias in reality are due to disease, that there is a congenital weakness which predisposes to hernia. The question of handling at so tender an age is one that requires very great judgment and great skill, and Dr. Rowley is to be commended on the way he handled this and the way he got through with it.

Dr. ROWLEY, closing the discussion:

I have not much more to say, but in closing I want to thank Dr. Preston for his discussion. It would be very interesting to see this child when she arrives at the age of puberty, and see whether there will be any dysfunction in the way of dysmenorrhea, or not. There was a certain amount of cystic degeneration in those ovaries. I hope we shall be able to examine that child when she gets to be fourteen years old, so we can check up on her.

ANESTHESIA IN RELATION TO RESPIRATORY VOLUME

M. Ide, speaking before the Belgian Royal Academy of Medicine, recently, questioned P. Bert's affirmation that the absolute quantity of chloroform inhaled has no significance, and that only the gaseous tension of the narcotic is important. His experiments lead him to believe that the effects will vary with the respiratory capacity. Cardiac, febrile, uremic, diabetic, exophthalmic goiter and certain neurotic patients may present excessive intolerance because of their exaggerated respiratory volume. One should always take account of the respiratory volume in the study of general narcosis and in the dosage of chloroform and ether.—*Journal, A. M. A.*

SCIATIC PARALYSIS FOLLOWING SNAKE-BITE*

(Report of a Case)

By J. H. CRAFT, M. D.
Springton, W. Va.

Mrs. C. F., Arista, W. Va.

Family History—Negative.

Past History—Negative except that she is the mother of two full-term children.

Present Illness—Patient is a well-developed and well-nourished white female, 23 years old, who on September 6, at 1 p. m., was bitten supposedly by a snake of unknown species although she asserts that it was of the variety commonly known as garter snake. In a few minutes she began to feel nauseated but was not seen by a physician until 7 p. m. when Dr. P. J. McElrath was called. He found a small, punctured wound over the gastrocnemius about three inches below the lower border of the popliteal space. As there was some congestion around the wound and a discoloration which extended from the hip to the heel, the puncture was enlarged slightly and cupped, withdrawing about two ounces of blood. On the follow-up visits for the next two days she was apparently normal but on the succeeding day there was found to be some tenderness in the popliteal space, with pain and numbness which reached from the heel to the crest of the ileum. There was no loss of muscle power and only a slight loss of sensation. As there was again some discoloration the wound was again opened and due to the low clotting power of the blood, she continued to bleed slowly for nine hours when the hemorrhage was controlled by tight compresses. The next day there was a complete loss of sensation over the above described area, with partial motor paralysis. The reflexes were lost and deep sensation was absent. On September 13 she aborted a six weeks' foetus, and due to this condition was kept in bed for ten days and when followed up again, it was found that she had complete paralysis, both motor and sensory, along the course and distribution of the great sciatic nerve, but there seemed to be no paralysis, either motor or sensory, along the courses and distribution of the ileo-hypogastric and ileo-inguinal nerves which give sensation on the inner side of the thigh to within about three inches of the knee. These nerves are derived from the first branches of the lumber plexus while the great sciatic nerve springs from the sacral plexus.

Until the present time, there has been no muscular atrophy in these muscles which are involved in the motor paralysis. About October 1 she was seen by Dr. Fox of the Bluefield Sanitarium who suggested the possibility of hysterical paralysis and advised that she be given electric treatments. This has been done until the present time except when interrupted: First, by a recurrence of the uterine hemorrhage; and, second, by pain around the head of the femur which was so severe that she was placed in bed for two days and kept under the influence of morphine for its control.

On November 17 there was a recurrence of this pain after she had done some washing.

As I am unable to find anything in the medical literature at my disposal which throws any light upon this case, I should like to hear some discussion of it.

* Presented before the Mercer County Medical Society, Matoaka, W. Va., November 24, 1925.

DELAYED UNION*

By W. W. GOLDEN, M. D., F. A. C. S.
Elkins, West Virginia

MY SOLE PURPOSE in this short paper is to direct your attention to certain recent investigations which are of much academic interest and contain worth while practical hints.

I am referring to the work of Anatole Kolodny at the University of Illinois and of Henry A. Petersen at the Hunterian Laboratory of the Johns Hopkins. A report of the former is published in *Surgery, Gynecology and Obstetrics* for June, 1924, and of the latter in *The Journal of Bone and Joint Surgery* for October, 1924.

Kolodny's work concerns itself entirely with the influence upon bone repair of certain internal secretions. Very briefly his findings are as follows:

Testes. In castrated young animals (puppies) bone repair is much delayed. By this Kolodny explains the well known fact "that the condition known as pubertas praecox virilis is accompanied by premature closing of the epiphyseal synarthroses, and that in genital hypoplasia, or so-called late maturity, we see an increase in height, especially in the length of the legs due to the late closing of the epiphyses". He adds that evidently this fact has long been known to farmers who increase the size of roosters and pigs by castration. In mature animals castration is without effect upon bone repair.

Pancreas. Removal of a large part of the pancreas but not enough to produce diabetes in the dog caused delay in the union of fractures. Curiously enough an apparent contradiction of this fact in the human came to me the other day unexpectedly. I refer to a highly instructive clinical address delivered by Dr. Joslyn of Boston in the Section on Medicine of the A. M. A. at the recent meeting at Atlantic City. The address dealt with diabetes in children with special reference to results under treatment with insulin. However, the statement which I wish to quote is that, with one exception, children who have made excellent recoveries in every way have remained stunted in height, which suggests (though not necessarily) premature closing of the epiphyses.

Thyroid. Thyroidectomy (with special care not to injure the parathyroids) invariably caused marked delay in union of fractures.

Petersen's work concerns itself entirely with a study of delayed union in the human with reference to the calcium and phosphorus content of the blood. His studies are based upon the work of Howland and Kramer on rickets as published in *The Monatsschr, fur Kinderheilkunde,* XXV Bd. These investigators found that in rachitic patients there is always a marked reduction in the amount of phosphorus in the serum and often a moderate reduction in the amount of calcium. Petersen was led to undertake his studies by observations made by many that nonunion was especially common after osteotomy for bow-legs, and that union in such cases takes place when the rachitic condition was cured.

It appears that normally the amount of calcium in the serum of an adult is 10 milligrams per 100 c. c., and of phosphorus it is 3.8 per 100 c. c. In a study of 17 cases Petersen has found that in eleven there was a deficiency of calcium or of phosphorus. For certain technical reasons the amount of calcium and phosphorus are expressed not by

* Read before the Surgical Section of the West Virginia State Medical Association, at Bluefield, June 10, 1925.

stating the quantity of each but by multiplying the one by the other and giving the product. Thus normally the calcium-phosphorus content of the serum is 10 multiplied by 3.8 which equals 38.

Peterson's conclusions are as follows:

"1. In many cases of ununited fractures, there is an underlying basis a constitutional disturbance responsible for the condition, demonstrable as a deficiency in the inorganic bone-forming elements of the blood.

"2. This deficiency shows itself as either a low phosphorus or a low calcium, in most instances the former. In those patients presenting a low phosphorus there is usually an abundant callus, but no calcification; whereas those patients with low calcium show little or no callus.

"3. No healing of the fracture takes place when the inorganic constituents, calcium and phosphorus, are so reduced that the product of these elements is less than thirty; a little healing takes place between thirty and thirty-five; active healing results with a product between thirty-five and forty.

"4. Patients with ununited fractures in whom there is a deficiency of one or the other of these elements will, when the deficiency is compensated, go on healing."

A careful reading of Petersen's article fails to carry conviction, but does set one to thinking and conveys some practical hints. The most useful hint is the employment of antirachitic measures where union is slow, such as cod liver oil, the ultra violet ray, or exposure to sunlight, and proper dietary regimen. These measures are particularly effective in raising the phosphorus content of the serum. The administration of yellow phosphorus has also been recommended. Calcium may also be administered, but by itself it has a tendency to cause a reduction in the phosphorus. It should be administered only when measures are taken to increase or protect the phosphorus content of the serum.

It goes without saying that all the older well tried local and general measures should not be neglected.

One more word before closing. Until the laboratory furnishes us with a full understanding of the etiology of all cases of nonunion and delayed union this condition will continue to occur in the practice of the most experienced and painstaking surgeons. This fact is not as widely known among the laity as it should be. Indeed the same is true with many physicians. The surgeon, therefore, often comes in for criticism of his treatment, when, as a matter of fact, the criticism should be directed against the imperfections of medical science. In certain cases such criticism is particularly hard to combat. I refer to instances where apposition of the fractured fragments is incomplete. We all know that a small amount of such incompleteness, say one-fourth of the diameter of the bone, has no effect whatever upon the progress of union. Yet when this happens in cases of nonunion due to obscure constitutional causes the incompleteness of the apposition is blamed for the result, and the surgeon held responsible. It is, of course, proper that we should be charitable towards one another in passing judgment upon the result of treatment, but in the subject under consideration it is not charity that we are asking. We ask for better knowledge and understanding.

CARBON DIOXID AS AN AID IN GENERAL ANESTHESIA

Personal experience has convinced John S. Lundy, Rochester, Minn. (*Journal A. M. A.*, Dec. 9, 1925), that carbon dioxid in moderate concentration assists in producing anesthesia, rendering the anesthetic apparently safer and easier to administer. Carbon dioxid should be used in such concentrations as will produce optimal results, and these vary with the individual and the type and stage of the operation. Too much carbon dioxid is worse than none, and care should be exercised to prevent more than 5 per cent being used. The results thus far in a series of 1,350 cases in the Mayo Clinic are satisfactory enough to warrant further investigation by others in the use of carbon dioxid during the induction and maintenance and at the termination of ordinary general anesthesia.

FRACTURES FROM THE DEPARTMENT'S VIEWPOINT*

By MR. LEE OTT
State Workmen's Compensation Commissioner

THE FUNDAMENTAL OBJECT of the Workmen's Compensation Law is to restore each injured employee coming within its purview to as nearly possible the condition he would have been in but for the accident. The principle of the common law was that the amount of every injury might be estimated by pecuniary valuation. But the dictates of equity and fairness clearly pronounce that some injuries are unpaid and unpayable and that complete satisfaction is not to be obtained by mere money payments.

The true ideal of theraphy is restoration of function, not mere anatomical repair. An example will best elucidate our meaning.

Not so long since, a fractured limb was held to be cured once union of the fragments ensued; experience gained under the compensation laws, however, soon revealed the fallacy of this view, for even when union had occurred, the injured man did not immediately resume work. The necessary immobilization of the part brought its aftermath—pain, edema and so on. In short, functional restoration of the limb was not complete. It must be recognized, therefore, that anatomical repair is but the prelude to functional recovery.

Now, in a simple fracture, given good alignment and an absence of complications, functional restoration may be complete; but in the presence of mal-union, vicious union, or other unfavorable features, functional recovery is correspondingly prejudiced. But even here the marvelous powers of functional adaptation come into play and industrial capacity is wholly or partially regained—this, moreover, often independent of any favorable modification in the objective state, that is, the anatomical lesion.

Clearly, therefore, from the economic viewpoint, it is the functional capacities of the injured member or organ that should engage our attention. In investigating these aptitudes the measure of functional adaptation that has been realized will be revealed and, incidentally, the real working capacity or incapacity will be determined.

Subscribers to the workmen's compensation fund want their employees to have the best hospital, surgical and medical services attainable, for the following reasons:

First, it will keep down their rates.

Second, it will enable their men to return to their work and keep up the normal production of the industries.

Third, it creates and helps to keep up the morale of the employees because they know they will get good hospital and surgical treatment when accidents happen.

You medical men are being challenged today by the industries of West Virginia. The employers are depending upon you to give your best and to return these injured men to their work in as near normal condition as is possible and as is consistent with good surgery. You are being depended upon to reduce to a minimum the number of cripples in this great industrial commonwealth.

When an employer has crippled men pointed out as having been injured at his place of business, whether it be manufacturing plant, coal mine, stone quarry or a

* Read before the Surgical Section of the West Virginia State Medical Association, at Bluefield, June 10, 1925.

wholesale house, it is a reflection upon his business. It may mean that the employer was at fault; it may mean that the man himself was at fault, and it may have been an unavoidable accident but no matter what the cause may have been, the employer and the employee are depending upon you to return that injured man to his daily tasks, if possible, without being a cripple.

The majority of accidents are fractures of the extremities. Bone surgery is no doubt difficult surgery, slow and tedious. It has been my observation that it takes much longer at present for a fractured bone to unite and the man to return to his work than it did before there were any compensation laws. I am not attempting to be facetious when I say that.

The injured man of today is demanding a little better service than formerly. He knows that it is due him and he is being paid while convalescing. He is not in a big hurry to return to work. He finds more aches, pains and deformities to complain of. However, we must be fair and give the claimant the benefit of the doubt in doubtful cases.

No doubt we are getting more severe types of fractures from the ever-increasing industrial development but this should be minimized by the increased efficiency of the surgeons and hospital staffs of today. The latter should keep apace with the scientific world even as the state's industries gradually keep step with competitive industries elsewhere.

It has been my observation that surgeons in West Virginia are overlooking the after-treatment, the post-operative care of their patients. I do not believe that you are giving sufficient attention to this part of your obligation to your patient. Let me cite one of numerous similar cases that have come to my attention in the last few years.

Claimant has good union and apposition; no shortening, if any, very little. But, and this is the sad part, he has partial or complete ankylosis, atrophy of muscles, loss of sensation, flat feet or everted feet. It is not the vicious or non-union that causes a high percentage of permanent disabilities, for they are comparatively rare. It is these stiff joints, muscular atrophy and flat feet that cause most of our trouble.

You may help to improve this condition if you will give your patient more instructions in how to help himself to restore the usefulness of his fractured members.

Many of you are discharging patients without any instructions of any kind. You remove the cast or splint, examine for union and anatomical position and if the patient is all right, you will say:

"Get out, we are through with you."

This results in partial permanent disabilities and cripples and is certainly an economical handicap to the man, to the employer and to the State; the latter because it affects its citizens and we do not want the state full of cripples. Any bad result is a living and breathing monument to our industries and our surgeons.

The hospitals of today are lacking in modern equipment in caring for the after-treatment of fractures. In recent years, science has devised several meritorious systems for rehabilitating the industrial cripple. Electrotheraphy, massage and judicious application of heat, known as baking, have taken their places as important phases of post-operative treatment.

It has been asked why so many patients go to cities outside West Virginia for treatment. The answer lies in the same statement.

"Hospitals elsewhere are more thoroughly and efficiently equipped."

And in conclusion: When surgeons of West Virginia DO pay more attention to after-treatment of fracture, when virtually normal use is regained of fractured members and the number of cripples drops to a minimum, then all industrial West Virginia and the thousands of employees will call them "blessed" and the state will be a happier place in which to live.

Words of advice to the injured man, a set schedule for him to follow during his convalescence and the installation of more modern hospital equipment will all reduce the list of maimed and assist materially in the economic scheme of things in this great industrial state.

INTENSITY OF HOOKWORM INFESTATION IN ALABAMA

From the evidence submitted herewith, W. G. Smillie and D. L. Augustine, New York (*Journal A. M. A.*, Dec. 19, 1925), believe that they are justified in the conclusion that true hookworm disease as a real economic menace to the welfare of the people in Alabama is limited to the rural white children of school age. Hookworm infestation is widely distributed among all age, social, economic and racial groups. The persons with light infestations are not to be ignored, for they are hookworm carriers and are potential sources of danger to the community. They are not cases of hookworm disease, however, and should not be considered as such. If these facts are true for Alabama, they are probably also true for the other coastal plain Southern states having a similar type and distribution of population, and similar climatological and geological conditions. This conception, if accepted, logically requires modification of the plan of hookworm control in the Southern United States. Hookworm treatment should not be given indiscriminately to every person who shows a positive stool. It is unjustifiable and unfair to submit such a person to the discomfort of a rigorous hookworm treatment when he is harboring only a small number of hookworms which are doing him no measurable harm. It is a poor public health organization to waste time and money on treatment of a community for hookworm infestation when that infestation is causing the community no economic loss. Hookworm treatment should be employed as a weapon to combat and control true hookworm disease. It should not necessarily be pushed until all persons treated reach the point of microscopic cure. If one standard treatment is given to moderately infested patients and two such treatments to those heavily infested, the group infestation will be reduced to the point of economic cure, in that the intensity of infestation of the treated patients becomes so light that they are carriers and do not have true cases of hookworm disease. Sanitation and education must be the chief modes of control of the carrier. Long experience by many workers has clearly shown that treatment alone is of little avail in the control of incidence of infestation in an area favorable to development of hookworm larvae. The logical plan of public health procedure in hookworm control in the Southern states therefore is to: 1. Control the carrier. Proceed methodically and systematically in the education of the people in regard to the mode of hookworm infestation, and push vigorously the installation of sanitary toilets throughout the rural areas of the Southern states. 2. Limit treatment to actual cases of hookworm disease in rural white school children. This can readily be done by making an ova count estimation of intensity of infestation of rural white school children as a routine part of the regular annual or biannual examination of school children. All persons with light infestations may be advised that they are carriers but do not need treatment. Hookworm treatment need be administered only to those with moderate or heavy infestations. If such a plan were followed, hookworm disease as a real menace to the people of the Southern states could readily be kept under control by the public health organizations already existing in the various states as a part of the routine procedure in the medical examination and correction of defects of school children.

[EDITORIAL NOTE.—Hookworm is more prevalent in West Virginia than generally is supposed and this fact should be kept in mind in patients with tractable diarrhea and anemia.]

PYOCYANEUS MENINGITIS AFTER LUMBAR PUNCTURE

Isidore I. Levy, Baltimore, and Armand E. Cohen, Louisville, Ky. (*Journal A. M. A.*, Dec. 19, 1925), assert that the case presented by them is the first reported case of *Bacillus pyocyaneus* meningitis following lumbar puncture, not preceded by or associated with other pyogenic infection and in which the patient apparently made a complete recovery. Excessive headaches were relieved by spinal drainage, and the authors think that this procedure, together with the intraspinal injection of inactivated autogenous blood serum, has a favorable influence on the course of the disease.

LIBRARY OF THE COLLEGE OF PHYSICIANS

THE WEST VIRGINIA MEDICAL JOURNAL

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS

J. HOWARD ANDERSON, Marytown — WALTER E. VEST, Huntington — CHARLES W. WADDELL, Fairmont — HARRY M. HALL, Wheeling

THE JOURNAL issued on the first of each month. Entered as second-class matter, January 1, 1916. Acceptants for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Authorized July 24, 1919.

Subscription to Members ..... $2.00 Per Year
Subscription to Non-Members ..... $3.50 Per Year
Single Copies ..... 35 Cents

OFFICERS

President:
J. R. BLOSS ..... Huntington

First Vice-President:
R. O. ROGERS ..... Bluefield

Second Vice-President:
H. C. SKAGGS ..... Montgomery

Third Vice-President:
D. A. MACGREGOR ..... Wheeling

Treasurer:
HUGH G. NICHOLSON ..... Charleston

Executive Secretary:
MR. STERRETT O. NEALE ..... Charleston

Delegate to A. M. A., 1926:
J. R. BLOSS ..... Huntington
C. R. OGDEN, *Alternate* ..... Clarksburg

Delegate to A. M. A., 1926-27:
H. P. LINSZ ..... Wheeling
R. A. ASHWORTH, *Alternate* ..... Moundsville

COUNCILORS

First District:
H. P. LINSZ, (1-year term) ..... Wheeling
C. G. MORGAN, (2-year term) ..... Moundsville

Second District:
C. H. MAXWELL, (1-year term) ..... Morgantown
C. H. HALL, (2-year term) ..... Elkins

Third District:
JOHN FOLK, (1-year term) ..... Bridgeport
C. R. OGDEN, (2-year term) ..... Clarksburg

Fourth District:
J. E. RADER, (1-year term) ..... Huntington
W. E. VEST, (2-year term) ..... Huntington

Fifth District:
J. H. ANDERSON, (1-year term) ..... Marytown
H. G. STEELE, (2-year term) ..... Bluefield

Sixth District:
R. H. DUNN, (1-year term) ..... South Charleston
C. A. RAY, (2-year term) ..... Charleston

¶ All original articles for THE JOURNAL must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

¶ Our readers are requested to send marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

¶ It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

¶ Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

¶ Advertising forms will go to press not later than the tenth of each month. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

¶ Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, 211 Smallridge Building, Charleston, W. Va.

STANDING COMMITTEES

Medical Defense Committee

H. P. Linsz, Wheeling; C. R. Ogden, Clarksburg; C. G. Morgan, Moundsville.

Committee on Scientific Work

G. H. Barksdale, Charleston; O. D. Barker, Parkersburg; D. A. MacGregor, Wheeling, Scientific Secretary.

Committee on Medical Education

W. T. Henshaw, Charleston; J. N. Simpson, Morgantown; W. S. Fulton, Wheeling.

Workmen's Compensation Committee

J. E. Cannady, Charleston.

Public Policy and Legislative Committee

C. A. Ray, Charleston; G. A. MacQueen, Charleston; R. H. Walker, Charleston; James McClung, Richwood; J. R. Bloss, Huntington; D. A. MacGregor, Wheeling.

Committee on Hospitals

Roy Ben Miller, Parkersburg; F. L. Hupp, Wheeling; A. P. Butt, Elkins.

Committee on Professional Relations

J. R. Shultz, Charleston, chairman, (3-year term); H. G. Nicholson, Charleston, (1-year term); H. R. Johnson, Fairmont, (2-year term); A. G. Rutherford, Welch, (4-year term); W. R. Goff, Parkersburg, (5-year term).

Surgical Section

E. Bennett Henson, Charleston, chairman; W. R. Goff, Parkersburg, secretary.

Eye, Ear, Nose and Throat Section

T. W. Moore, Huntington, chairman; R. A. Tomassene, Wheeling, secretary.

EDITORIAL

GREETINGS

As President of the West Virginia State Medical Association for 1926, I wish to extend to each member my sincere wishes for a Happy and Prosperous year. Not only do I wish this for your individual lives, but I pray for it in our Association.

Last year was the best year that the West Virginia State Medical Association has ever had in its history. When the question came up of having an executive secretary, and the necessity for increasing our annual dues was under discussion it was prophesied that our membership would fall from almost eleven hundred to approximately half that number. It is particularly pleasing to me that our membership was almost as great in 1925 as it was in 1924. It is true that we lost approximately one hundred of the old members as delinquents, and yet the new members admitted made this up.

It is the hope of your President, and all of your officers, that we may accomplish greater things for the organized profession during the year 1926, than ever before. It is necessary that each member of the State Association become imbued with this spirit of personal service.

The Journal comes to you under the new Publication Committee with this issue. You will note that it is larger, and I feel sure that it will be better than it has been before. *The Journal* will continue as it has for the past ten years, an ethical *Journal,* — one whose advertising pages are only open to accepted products. The personnel of the Committee on Publication in advance guarantees the very best of scientific material. It is hoped that the members throughout the State will make any suggestions which occur to them for the betterment of *The Journal.* The Committee on Publication will always welcome these suggestions.

The President intends to try and visit as many of the component societies during this year as it is possible to attend. He asks of you that you will lend your earnest and wholehearted support of the organization.

JAS. R. BLOSS.

———o———

AN INTRODUCTION

The plan of a new Editorial Board with one man acting as chairman makes its bow to you—the Profession of Medicine of the Great State of West Virginia—in this number! Will it be a success? That depends partly on the Editorial Board, and in a greater measure, on each and all of you. Government in these United States is supposed to be democratic, and yet we all know a great deal of the autocratic has worked its way into the operation of that democracy. In almost all instances it has been made possible for the autocratic to step in because the body politic elected men and then never paid any attention, after election day, to their individual responsibilities in living up to their several mandates.

Viewed at a certain angle, it is highly complimentary to any body of men to feel their fellows have given them an office or a place of power and activity, because it impels perfect confidence in those so chosen. Most men, holding office in any form, have felt a flush of pride in this complimentary gesture. But as Michael Arlen says: "Human nature being what it is, the edge of this gesture in time wears off, and it is pretty difficult to imagine a body of men anywhere who can maintain their best unless those they represent, day after day, and month after month, in some form or other, keep continually in touch with them." "Keeping touch with them," means, in its relation to this Editorial Board, giving genuine, earnest, individual and enthusiastic support with constructive criticism.

Now, this brings up the ever perplexing problem of just what is constructive criticism. In the present controversy going on

in the government aircraft upheaval, almost all of it swings on this elementary question of, just what is constructive criticism? There are many people who believe all criticism, tinged with a little compliment or flattery, is constructive, while any which handles anything in the proverbial "without gloves" is destructive. After all, the simple definition hits it best, "Criticism uttered with a clean heart" is constructive.

Criticism uttered to hurt or confuse or with malice aforethought is destructive, and there the matter must lie with you who keep in touch with *The Journal* and have the courage to voice your thoughts. No man, anywhere, in any line of endeavor, who prides himself on being seasoned to the world's perplexities, believes for even a single moment that you can please everybody. That has passed into being an axiom. Nor do these new Board members feel they are any exceptions. Furthermore, some one, not liking one member may like the next and so on. But they feel it will be up to the Board, in the main, to satisfy you all, most of the time.

It is to be asked sometimes whether you that grow impatient with your own *Journal* have compared it with some of the others. If you have not, then pray do some time. Maybe you will grow somewhat less exacting. Many of them may seem to have a more vigorous appearance, while some you might expect to be ponderous, evidently have no such intention and they are long established at that.

You will note, too, in a general comparison that many of the others are trying to cultivate a neighborly spirit, even at the expense of the ultra-scientific and you will recall, too, that this has been the object of your *Journal* for several years. They all seem to feel that the main object of a State Journal at present, is to get us all better acquainted and organized so that we will be better able to cope with some of the obsessions what envelope us. You know, do you not, that the public regards us as a little too scientific? And is not the public partly right? There are few startling innovations in medical progress that sweep you off your feet in any one year. Most medical men are very well trained and it does not require volumes of literature to carry what is new to the direct attention of such men in that time.

We are struck with the number of articles there are in the state journals, as well as elsewhere, on the Gall-Bladder. The many men who come before the county societies dilate on the subject, too. These have been surprisingly alike for a long time, very much a matter of repetition and yet for one seeking after knowledge—let us say a tyro—it is doubted if they actually have cleared up the simple question of when to drain and when to remove. This trend in medical literature has been to the observing, so very evident that even such an august a body as the American Medical Association now hopes to place the very special scientific contributions in a series of journals called archives that treat this or that specialty to the exclusion of all else. That is as it should be and leaves the research and progress up to the given point of practical application by the general body, to a line of investigators and clinical experts who alone can appreciate it.

The conduction of a medical journal on the road to success has its very special problems. For instance, we asked a celebrated surgeon in a great city some time ago, what he read first in the Journal of the American Medical Association. His reply came without hesitation: "I always turn at once to 'Tonics and Sedatives.' "

We certainly were not prepared for any such answer. But from that time we have followed just such a line of questioning. A great deal of information has been gained. We find many men do not even open their journals. We find many who read only the summary or the conclusion of an article. Many read only the personals. Some gaze at the advertising pages, to the exclusion of articles they regard as too heavy for the average man. Some reply they read the *Medical Brief* or a like journal and look over the little *Medical Economics* because these alone have really helpful advice. The reply of the greatest number picked up here and there is that they have the spirit to read but

the flesh has no time, being engaged in getting something whereupon to pay the Government an income tax.

Staged against this somewhat careless "citizenry" are those who are impatient with the trivial character of their state journals. Plethoric with knowledge, they feel that all others have a like condition. Sadly, others have not. It becomes evident that their viewpoint may be the ideal one—the star at which to aim—but at present it cannot be accomplished in one fell stroke. They must be patient, being willing to accept, like Lazarus, such bounties as come their way, when such can be offered, and have confidence in their representatives. If they are long disappointed, their constructive criticism, with a clean heart, is the remedy.

"*Life*" said, during the war, that the best news to those "over there" was not what the Mayor of your city said in his last speech but rather to tell them about the cat and the canary. Human nature, being what it is, we should remember the above when petulant with the desire for glittering gems as constants to regard.

The new Editorial Board bows to you in this number with the hope you will regard its members as your Public Servants in Fellowship. We are trying to say in its pages that it is not our *Journal*—but your *Journal*. We must of course strive to engender a spirit of possession in you which shall end in contempt, in indifference or in pride. Either of the first two, the one bad as the other, we sincerely hope never to merit. We realize the difficulties hinted at in this article and know we must meet them as best we can.

We want—first of all—every doctor, worthy of the title, in this State to be a subscriber, which means a member as well. We want you to tell of the little happenings—"the cat and the canary"—so to speak. We want your experiences, failures and successes told so that others may profit, want your articles, scientific and ultra-scientific so that each may have recourse to what he earnestly desires.

But above all, we want your enthusiastic support—the kind you give to the name plate on your automobile when you say:

"She can go 60 miles an hour, hasn't been torn down in the last year, uses hardly any oil, is easy on tires, requires but little attention and is all in all the best car on the market today."

That is the kind of support needed, the every day, sincere, yet friendly support and the criticism too from the "clean heart."

Given these, we feel your *Journal* will be a success.

Fellow members!! Your patience, your enthusiasm, your cooperation and your best wishes—all in the Common Cause!!

HARRY M. HALL.

———o———

FALL IN!

With the approach of the New Year most of us make resolutions, and unfortunately a large percentage of these go to make up the proverbial paving material for the highway to Hades. However, as physicians we should make one resolution for 1926 and LIVE up to it. Let us each join our society and induce every other physician we can to take the same step. Not only should we become MEMBERS of the society, but we should become WORKERS in the society. The State Association needs each of us and each of us needs the State Association. Besides, the more we touch elbows, the better we know each other, the less friction in our ranks and the better doctors we are. Probably there has never been a time when it was more absolutely necessary for the medical profession to stand shoulder to shoulder and present a united front than now. The faddist, like the poor, is omnipresent. The cultist is upon us and with his subtle propaganda endeavors to undermine the faith of the populace in us and our skill. The spectre of State Medicine stalks in the shadows of the background. We are sneered at by our legislatures and do not wield the influence in our communities that is our due. The remedy for these ills is organization. Fellow physicians, the local society calls; the State Association calls; the welfare of our profession, the noblest and most altruistic of professions, calls; duty calls. Let each respond. Fall in!

WALTER E. VEST.

A NEW POLICY

The trend of present day medicine is an endeavor to keep folks well, and to this end many volumes and magazines are being put into readable and comprehensive form for the general public.

The profession is advocating and trying to educate the public in the great advantage of periodic health examination of the apparently healthy, and organizing post graduate classes of physicians to study and work out plans and proceedings most suited to their immediate locality, for the benefit of those who would take advantage of this very important step in the preservation of health.

It will be a policy of the Board of Publication to publish articles from time to time under the head of "Good Things to Know," articles pertaining to these and other like subjects.

We earnestly solicit all members of our Association to submit any extract or abstract from other publications or editorials of their own, which will help to make this department readable and interesting.

C. A. RAY.

———o———

AN ANNOUNCEMENT

Because of conditions arising that necessitated a last-minute change in printers, the January edition of *The Medical Journal* is late.

Everything was in readiness for the issue. The copy was in the hands of the printer and some work had been done. Then it was announced that there would be a change in ownership and that there was a possibility of the plant being closed for a time.

Rather than risk an unreasonable delay, it was decided to immediately recall the contract and place it in the hands of another reliable publishing company. This was done and within 24 hours, the linotype machine men were at work on the copy that composes the scientific section of this issue.

The chairman and secretary of the publication committee have had every cooperation from the management of the Mutual Printing Company of Charleston, which hereafter will publish *The Journal.*

One important announcement made by the company's officials was that every attention will be given to requests for reprints. A schedule of costs is being prepared and members will deal direct with the company.

Each month, as the scientific papers are selected for publication, the executive secretary's office will notify each author that his paper is to appear. If reprints are desired, the author then must write immediately to the Mutual Printing company and place his order. The executive secretary's office, of course, will cooperate fully but orders are to go direct to the company. This reduces the possibility of confusion arising from duplication of effort.

Authors of papers are urged to send in their orders promptly, also. Several hundred pounds of linotype metal will be tied up pending receipt of orders and because of this, the printing company has fixed a limit of 15 days after date of publication as the length that type will be held. All orders must be in by that time or the author will be required to pay the regular cost of printing his manuscript.

It is believed that this plan will prove the the most feasible yet put forward. We hope the membership will approve of it and assist in making it successful.

C. A. RAY.

———o———

A CALL TO ARMS

Under the heading, "The Attempt to Abridge the Usefulness of the Medical Profession," the *Illinois Medical Journal* (December issue) calls on every ethical practitioner to be on guard against those agencies that would blast the very foundations upon which scientific medicine is founded. The editorial reads:

"Powerful forces are at work openly or covertly to abridge the functions and usefulness of the medical profession. These forces are nationally organized. Their participation in politics is only one and perhaps the least menacing of their activities. Their assault on the scientific value of modern medicine is undoubtedly the greatest menace with which they confronted the American people, because in that are involved both our natural rights and our constitutional guarantees.

"No merely local and sporadic preparedness against this organized war on scientific medicine can be effectual. Our defense, we believe, must correspond in scope and vigor to the attack. The first step is to make the profession of the United States aware of the menacing situation. The second is to increase to the utmost the numerical strength of organized medicine to the end that the profession can act as a unit in the task of safeguarding scientific medical progress and protecting the rights of physicians both individually and collectively.

"In whatever we do to combat the warfare against science, we must avoid any feeling or appearance of aggression or challenge. We must remain patient, tolerant and charitable. But we owe it to the public no less than to our profession to be conscious of our rights and liberties and to be resolute in our determination to preserve them. A wider and closer union of the doctors and the laity is demanded and justified by the present, and still more in the future, warfare against science and our civil status."

There is only ONE method of combatting the thrusts of the fakirs and that is ORGANIZATION.

There are too many medical men who are content to go on their own sweet way and let the few do the work. Those listless characters are usually the ones, experience has shown, who are the first to cry aloud when the enemies of science are victorious.

West Virginia members are in position to do much toward stamping out the malicious opposition.

———o———

THE BANKERS SHARES SCHEME

Physicians throughout the country have been circularized by either one concern operating under different names, or by two or more concerns that use exactly the same advertising matter. The scheme is that of offering for sale "Bankers Shares" of the Ford Motor Company of Canada, Ltd. The physician is told that, as he is the owner of a motor car, he is "hereby extended the privilege of subscribing for, not to exceed fifty [or some other specified number] Ford Motor Company of Canada, Ltd., Bankers' shares at $10 each." The offer, however, is sent indiscriminately to physicians whether they own motor cars or not. The "Special Subscription Privilege" blank is an imposing looking affair with an orange colored border, a serial number and a date limit. The usual get-rich-quick line of "selling patter" is used, the physician being told that those who invested in Ford of Canada in 1904 have received more than $32,000 for each $100 invested; he is told, further, that if Ford of Canada grows to be as large as Ford of the United States, the "$100 invested in Ford of Canada should then be worth more than $15,000." The officers of Ford Motor Company of Canada, Ltd., are then named, and the impression is given that this company is behind the sale of these so-called Bankers Shares. The facts are that the Ford Motor Company of Canada is not even remotely concerned in the offering of these Bankers Shares, the only outstanding stock being the capital stock of $100 a share par value, which is quoted on the open market and the various exchanges. Those operating the "Bankers Shares" scheme have, it appears, acquired a block of Ford Motor Company of Canada stock which at the present time is quoted around $490 a share. They then divided each share up into 100 parts which they call "Bankers" Shares" and offer these to the physicians of the country at $10 a "share." In other words, physicians "are extended the privilege" of paying $1,000 a share for Ford Motor Company of Canada stock when the same stock can be purchased on the open market for less than $500 a share. One of the concerns, or, if it is one concern, one of the names under which it operates, has already been restrained from doing business in New York by an injunction issued some months ago on the grounds that the scheme is one that is calculated to deceive. The rest of the country is still "easy meat." Physicians will do well to throw these "Special Subscription Privilege" blanks into their waste baskets.—*Jour. A. M. A.*, July 4, 1925.

FIFTY-NINTH ANNUAL MEETING DATES FIXED

General Arrangements Committee, Representing Monongalia County Society, Selects May 25, 26 and 27

Plans for the fifty-ninth annual meeting of the state association were advanced at a meeting in Morgantown December 17 when the general arrangements committee of the Monongalia County Medical Society fixed the dates, May 25, 26 and 27.

Sessions are to be conducted in the Elks club. There is a large assembly room available for general meetings and the medical division. Adequate rooms also are available in the same building for the surgical and eye, ear, nose and throat sections. The same holds good for quarters for the council and the House of Delegates. Thus all meetings, although going on simultaneously, will be under the same roof.

This plan has many advantages, especially for the general practitioner. If he desires he may attend one of the sections to hear a paper on a certain subject and then return to his own section without any inconvenience.

Dr. C. B. Wylie, retiring second vice president of the association, heads the general arrangements committee. His co-workers are Doctors H. C. Powell, R. W. Fisher, Eldon B. Tucker, E. R. Taylor and W. C. Moser.

The sub-committees include:

Finance—Dr. S. S. Wade, chairman; Dr. W. C. Kelly, Dr. J. P. Lilly, Dr. M. H. Brown, Dr. J. R. Hughart.

Automobiles—Dr. G. R. Maxwell, chairman, Dr. L. W. Cobun, Dr. F. P. Coombs, Dr. G. W. Phillips.

Meeting Halls—Dr. C. H. Maxwell, chairman; Dr. R. H. Edmondson, Dr. C. B. Wylie.

Scientific Exhibits—Dr. T. J. McBee, chairman; Dr. R. H. Edmondson, Dr. F. H. Sisler.

Commercial Exhibits—Dr. C. B. Wylie, chairman; Dr. H. C. Powell, Dr. W. C. Moser.

Badges—Dr. E. B. Tucker, chairman; Dr. E. F. Heiskel, Dr. A. E. Smith, Dr. S. F. Talbot.

Hotels—Dr. E. R. Taylor, chairman; Dr. B. C. John, Dr. C. F. Boyers, Dr. H. V. King.

Reception—Dr. J. N. Simpson, chairman; Dr. C. R. Kessel, Dr. C. H. Maxwell, Dr. S. S. Wade.

Entertainment—Dr. R. W. Fisher, chairman; Dr. B. M. Stout, Dr. S. J. Morris, Dr. W. C. Moser.

Golf Tournament, etc.—Dr. B. M. Stout, chairman; Dr. H. V. King, Dr. B. C. John, Dr. W. B. Scherr, Dr. E. R. Taylor, Dr. F. T. Scanlon.

Publicity—Dr. H. C. Powell, chairman; Dr. W. B. Scherr, Dr. D. M. Pfost, Dr. F. T. Scanlon, Dr. R. C. Price.

Ladies' Reception and Entertainment—Mrs. S. J. Morris, chairman; Mrs. F. T. Scanlon, Mrs. B. M. Stout.

The executive secretary visited with the general arrangements committee and while it is most too early at this time to discuss any of the details, it might be said that everything is being done to entertain and provide for the largest attendance in history of the state association.

It is assured that hotel accommodations will be adequate and that Morgantown, always a hospitable city, is preparing to outdo itself for the visiting medical men.

The committee asks that every member immediately draw a red line around the three days on their new 1926 calendars.

MEMBERSHIPS TOTAL 1,008 ON DECEMBER 15

Oakvale Man Pays Far in Advance to Be First Member in 1926—Only 128 Names on Delinquent List

A check of the membership situation on December 15, preliminary to closing the books for the year, discloses that 1,008 members are in good standing. The total membership in 1924 was 1,064. The dues in 1925 were $10; the year before, $5. At the time this is written, 128 names are on the delinquent list.

Further comparison of the records show that actually the association has gained 73 new members in 1925 over the 1924 roster. It is indicated that the number of delinquents will be materially reduced, also, because several have made inquiry direct to the executive secretary's office. These in turn have been referred to the county secretaries and the final report likely will contain a much smaller number.

State association officials who are familiar with the contents of this report look upon it as being encouraging. But after all, it is estimated that there are 1,500 eligible physicians and surgeons in West Virginia and the aim for 1926 will be to enroll all of them.

A spirit of competition has arisen among the secretaries of the component societies as to who will be the first to make a substantial membership report. Also, the spirit has spread to the membership. *The Journal* in new form and other activities are causing the members to take an interest that they have not taken before.

The honor of being the first member to pay his 1926 dues goes this year to Dr. J. R. Boyd of Oakvale, Mercer county, whose check for $10 was received December 17 from Secretary Harry G. Steele of the Mercer County society.

Last year, the first certificate was issued to Dr. J. W. DeVebre of Ronceverte.

Dr. Steele, in sending Dr. Boyd's remittance, wrote: "Dr. Boyd is rather out of the way down at Oakvale but he is extremely prompt in paying his medical society dues."

And so, the year 1926 is started. By the time this reaches the membership, Certificate No. 1 will have been issued to Dr. Boyd. Thus the association starts on one of the most active years in its history.

This year, too, the membership will receive a certificate suitable for display in their offices so that all who visit there may see it. This certificate will be in addition to the pocket membership card.

The professional relations committee, in sponsoring the plan to display the membership certificate in members' waiting rooms, or offices, believes that it will work to the advantage of the organized profession. Certificates also will be issued to the honorary members, relating that they have been duly honored by the state association for their long and honorable service to the sick and afflicted.

For the benefit of the membership, copies of the state association constitution and by-laws will be mailed early in the year. The House of Delegates at the last annual meeting instructed that an up-to-date copy, containing all of the amendments since 1917 and conforming with the new plan of having an executive secretary, be printed and sent to all members at the earliest time possible. The corrections have been made, the rough draft copied and final revision now is being made. If possible, it is hoped to mail this along with the membership certificates.

The scope of the executive secretary's activities have broadened rapidly within the year. More than 150 cases have been looked

up for members in the Workmen's Compensation department, several pending before the Veterans' Bureau have been investigated, quite a volume of automobile insurance has been cleared, and the business management of *The Journal* has been conducted.

In addition, he attended the annual conference of secretaries and editors in Chicago; he has visited the Ohio State Medical Society and the Wisconsin State Medical Society to study the activities of those organizations. Visits have been made to many of the component societies and a large amount of work has been done as ex-officio secretary of the new Professional Relations committee.

During the coming year, the work is to be divided into five divisions, *i. e.*, Service to Members, *The Journal*, Organization, Automotive Insurance and Secretarial Work.

WHAT OUR NEIGHBORS SAID

Two of West Virginia's Neighboring States Sent Representatives to the Fifty-eighth Annual Meeting of the State Association at Bluefield to Extend Official Greetings to the Members and Delegates There Assembled— These Messages of Goodwill Follow

Greetings From Ohio

E. O. SMITH, M. D.
Cincinnati, Ohio

The officers of the Ohio State Medical Association thought enough of your invitation asking for a representative to attend this meeting, to send me here on this occasion. I am indebted to our president, Dr. Selby, for having conferred upon me the compliment and honor to bring greetings from one splendid medical association to another with equally high standards.

A doctor went in one morning to see a patient, and asked: "How did you find yourself this morning?" He said: "I awoke, and there I was." So I awoke on the Pullman this morning and there I was, being transported through some of the most beautiful scenery it ever has been my pleasure to observe. These wonderful West Virginia mountains, with their corresponding valleys, present so much of natural beauty to be entrancing. The most skillful artist's attempt to reproduce on canvas the scenery I enjoyed this morning would almost be desecration.

Last evening my little daughter asked: "Where are you going, daddy?" I said: "I am going to Bluefield, West Virginia." She inquired: "What are you going there for?" I replied: "To make about a four or five minute talk." She then said: "Why don't you send it by mail?" Of course this message could have been sent by mail, with much less effort and time, but I would have been deprived of the privilege of meeting with you again. I say "again" because it has been my privilege to meet with this association on many occasions, and it has been with a keen satisfactory interest that I have watched the growth and progress of your association. As I have seen you meet from time to time, over a period of many years, it is refreshing to follow your growth and progress. With each subsequent meeting there is a larger attendance and greater interest.

We are fortunate, in having friends and neighbors. Friends who will, if necessary, sacrifice time and effort to assist us. It is equally, or perhaps doubly, gratifying to know that these friends are our neighbors. An individual can not accomplish very much in this world alone; neither can a state medical association accomplish very much alone.

It is a unit, a part of the greater organization, the great American Medican Association, which has done so much for the betterment of the profession, and which is doing much more, in an altruistic way, for the protection of mankind. Therefore, gentlemen, as one friend, as one neighbor, to another, the Ohio State Medical Association sends to you, through me, their congratulations upon your achievements, also their greetings, felicitations and well wishes for your further development and usefulness to the great commonwealth of West Virginia.

* * *

Greetings From Kentucky

CURRAN POPE, M. D.
Louisville, Ky.

Mr. President, ladies, gentlemen, and members of the West Virginia State Medical Association:

The sister state on the south is last, but she is not least. You know, until I came to this town and state of yours, I possessed that egotism which is extremely common among Kentuckians, the feeling that we have the greatest state on the face of the globe; that, as the song says, the sun shines just a little bit brighter, the grass is just a little bit greener and bluer, that the turf is just a little bit firmer, our equine wonders the best in the world, and that we have the most beautiful women on the face of the globe. Kentucky is one of those states which is always eager to tell its friends that it never puts the latchstring on the outside of the door, because it has no latchstring. The door of Kentucky's hospitality swings back and forth, as did certain well known doors in pre-Volstead days. But when I came to this great state of yours I had to modify somewhat my Kentucky egotism. I find here singular beauties, wonderful scenery, and hospitality that has made me feel entirely at home. I have been to many, many state meetings; I have had accorded me, many honors, especially in recent months, having been the honored guest of Kansas, Nebraska and West Virginia. As the representative of our powerful organization in Kentucky—because we doctors are getting better organized all the time, and are doing better and better work—I want to say, in the name of my state, that I have never had accorded to me a more enjoyable time or more gracious hospitality than have been extended by this association. It is indeed a pleasure to voice the appreciation of my state, and to be accorded the honor of representing one's state on the program of this organization.

———o———

SOCIAL WORKERS INCREASE AS NEED IS DECREASING

In the *Chicago Sunday Tribune,* November 15, 1925, an article written by Harper Leech has the following heading: "Poor decrease, social worker ranks larger."

Chicago charities reported that there are only 12,000 families a year to take care of, against an average of 15,000 before the war. The final conclusion is as follows:

"With people helping themselves so well, and with fewer families in need of what usually is thought of as 'social work' one might assume that the number of 'social workers' would be decreasing. But it isn't. Come to hand a report of one such organization—a minor one—with the triumphant announcement that in its seven years' life its budget has climbed from $4,000 to $50,000, its paid staff from two to fifteen. It's the same all over and everywhere.

"A glance at the stationery of the organization solves the apparent contradiction of more social workers with less social work to be done. Teaching and propaganda are very largely the objectives of many social workers.

"What do they teach?

"Generalities are dangerous—but this one may fit. There are two theories of government. The state should be either a cop or a nursemaid.

"Organized social work is largely devoted to the propagation of the nursemaid theory." —*Illinois Medical Journal.*

REPORTS FROM COMPONENT SOCIETIES

Marion County

Dr. James F. Cooper of the American Birth Control League, Inc., New York City, delivered an address to 30 members of the Marion County Medical Society December 15 at the Fairmont Y. M. C. A. He spoke on "The Technique of Contraception," and it was a remarkable address.

Dr. Cooper explained the aims of the American Birth Control League, its reasons for birth control from national, local and individual viewpoints. Then he explained an effective method for contraception, a method effective in 98 per cent of the cases and yet harmless, he said.

Dr. Cooper is to appear in Wheeling, Morgantown and Martinsburg. Other societies who have not had the privilege of hearing him should request the American Birth Control League of New York, to send him to them.

Visitors included Dr. Grant of Grant Town. Members present were C. O. Henry, L. D. Norris, J. J. Jenkins, H. S. Keister, J. R. Tuckwiller, H. R. Yost, L. N. Yost, C. M. Ramage, P. F. Prioleau, C. L. Holland, C. J. Carter, E. P. Smith, C. L. Parks, J. B. Clinton, L. B. Boyers, W. F. Boyers, G. H. Traugh, L. D. Howard, H. R. Johnson, W. L. Coogle, W. W. Orr, C. L. Kinney A. W. Smith, J. C. Collins, E. W. Strickler, J. M. Barr, E. W. Howard, C. W. Waddell, W. J. Leahy, A. J. St. Lawrence and J. M. Trach.

The attendance was one of the finest of the last three years.

The officers elected by the Marion County Medical society for 1926 are:

President, W. F. Boyers, Fairmont.
Vice president, W. L. Coogle, Rivesville.
Secretary, G. H. Traugh, Fairmont.
Treasurer, C. W. Waddell, Fairmont.

Delegates elected to the annual convention are: C. L. Parks, G. V. Morgan and P. F. Prioleau, all of Fairmont; alternates, L. D. Norris, J. B. Clinton and L. B. Boyers, all of Fairmont.

Censors, W. J. Leahy, J. B. Clinton and E. W. Howard, of Fairmont.

G. H. TRAUGH, *Secretary.*

Mercer County

The annual meeting of the Mercer County Medical Society was held at Matoaka November 24, and the following officers were elected for the ensuing year:

President, J. R. Vermillion, Princeton; vice-president, J. H. Craft, Springton; secretary, H. G. Steele, Bluefield; treasurer, C. J. Reynolds, Bluefield; censor for three years, M. M. Mastin, Goodwill; delegates to the state association's annual meeting at Morgantown, John H. Bird, Rock; W. W. Harloe, Matoaka, and W. H. Wallingford, Princeton. Alternates, B. S. Clements, Matoaka, and H. B. Luttrell, Bramwell.

The new officers will be installed at the next regular meeting, which will be held in Bluefield.

The meeting Tuesday night marked the first time the county society had ever met in Rock district, and the treatment, reception and splendid program put on by the Rock district members have made other members of the society feel as though they have been overlooking the best part of the county in which to stage an honest-to-goodness medical meeting.

Twenty-four of the members of the society attended this meeting. They were the dinner guests of the Matoaka Kiwanis Club, and this was indeed a rare treat. A delightful dinner was served by the Ladies' Aid Society of the Matoaka Methodist Church and as entertaining features Dr. and Mrs. Harloe and Mr. Frank Booth and Miss Elizabeth Williamson appeared as the headliners. These were musical numbers which were highly appreciated.

The society convened for its annual meeting immediately following the supper and a splendid program was offered by the Rock district physicians. Their subjects were taken from actual experiences in their profession and were as follows:

"Value of the X-Ray to the General Practitioner," M. B. Caldwell, Matoaka; "Acute Abdomen, with Special Reference to Diagnosis," H. B. Luttrell, Bramwell; "Snake Bite, Report of Case," J. H. Craft, Springton; "Epidemic Jaundice," J. H. Bird, Rock; "Treatment of Eclampsia, by General Practitioner," B. S. Clements, Matoaka; "Some Therapeutic Aids, with Special Reference to Mercurochrome in General Practice," W. W. Harloe, Matoaka.

All of the subjects were freely discussed by the doctors present, and in addition a number of interesting cases were exhibited.

The meeting was enthusiastic and was proclaimed one of the best the society had held during the year.

The application of M. W. Sinclair, of Bluefield, for membership was received and will be acted upon at the next meeting.

B.-R.-T. Society

An interesting meeting of the Barbour-Randolph-Tucker Counties Medical society was conducted November 27 in Hotel Tygart, Elkins, W. Va. Those present included Doctors W. B. Golden, B. I. Golden, A. P. Butt, C. A. Groomes, E. R. McIntosh, E. M. Hamilton, A. S. Bosworth, W. S. Magill, C. H. Hall, W. S. Michael, Guy H. Michael, J. C. Irons and guests, C. G. Baker, D. D. S., and the Hon. C. W. Maxwell.

After the minutes of the previous meeting had been read and approved, Dr. Groomes made the report of the tentative program committee for guidance of the society in the next year. The report, after amendments, was adopted and it includes six salient features:

1. Regular meetings will be held bi-monthly hereafter.

2. Two meetings are to be held in each of the three counties each year unless the county wherein the place of meeting is scheduled should prefer otherwise.

3. A central program committee, composed of one member from each of the three counties, will have charge of each program, the chairman to be the member for the county entertaining.

4. That there shall be a central program committee, composed of one member from each county; the member from the county where the meeting is to be held shall be the chairman of the local program committee for that meeting.

5. Where possible, clinical cases should be presented and discussed. However, the local committee is to prepare such a program as it deems best for the occasion.

6. That an outside medical speaker be obtained for at least three of the meetings each year, if possible or practicable.

Dr. McIntosh read a practical paper on "Common Injuries to the Eye and Their Care." He especially called attention to the bad after-effects from a mistake in treatment or neglect. He emphasized the difference that should always be borne in mind by the general practitioner when treating injuries, especially as to acid or alkaline in cause, as the measures to be applied properly would be quite different.

He advised that in case of injury from an alkaline, water is not to be used if it is possible to get milk or some oil as the water does not immediately stop the damage but rather tends to spread it.

He also called attention to the difficulty of seeing small particles of glass and where such accidents to the eye are seen, he strongly advised sending the patient to a specialist where prompt and proper treatment may be administered.

Dr. Butt, discussing the paper, commended Dr. McIntosh upon its brevity and suggested that too much time usually is consumed in giving anatomy and physiological function rather than explanation of the disease, its diagnosis and treatment. He said, however, if he had lime in his eye he would use the remedy at hand and in absence of oil or milk, would certainly use water.

Mr. C. W. Maxwell gave a thoughtful talk on the "Public and the Physician." He said the greatest problem today is, how to live. He said the attitude of the lawyer and the physician are quite different—the lawyer is constantly looking to the past precedent while the physician is constantly looking to the future for advancement in knowledge of causes and treatment of diseases. Mr. Max-

well emphasized the fact that the great advance in medicine had been made in the last fifty years.

Attention was called to the neglect of the medical profession in not educating the people in the fundamental laws of health. He said the public should be informed as to how to maintain health and how to avoid disease —or if disease does appear, how to deal with it.

Physicians were urged to be more persistent in educating the young in health measures in the homes and especially in the schools. Attention was called to the great need of training the people to realize the necessity of obeying the physicians' instructions as to medicines, mode of living and care of person.

There is an inherent disposition of people, young and old alike, to rebel against their doctor's orders and they must be taught to submit to and follow his leadership, said Mr. Maxwell. He added that education was a slow process, at best, and he hoped that the medical profession will not falter. He stressed the fact that a far greater part of our knowledge is obtained through faculties of sight and hearing and he urged that the profession not only talk but demonstrate where possible that lasting impressions may be made.

Mr. Maxwell's address was highly commended. J. C. IRONS, M. D., *Secretary.*

Marshall County

The Marshall County Medical Society met December 8 in the court house, it being the regular meeting night. Several applications were received for membership into the society. Many out-of-town members were present and the meeting was very interesting and considerable business was transacted

A program for the coming year was arranged and a committee appointed to arrange for the next meeting in January.

After the business session the nominations and election of officers took place, the following officers being elected for the coming year: President, J. A. Striebich; vice president, J. J. Duffy; secretary, W. B. Hartwig; treasurer, O. P. Wilson; counsellor for three years, C. S. Fortney; delegates to State Medical Association for 1926, C. S. Fortney and W. P. Bonar; alternates, J. C. Peck and P. D. Barlow.

Monongalia County

C. W. Mosher was elected president of the Monongalia County Medical Society at a business meeting held following a dinner at the Morgan Hotel which was attended by 31 physicians of this section. Other officers elected were:

Eldon B. Tucker, vice president; G. R. Maxwell, secretary, and W. C. Kelly, treasurer. T. Jud McBee was also named a member of the board of governors of the county hospital, and Dr. Brinley John was elected to membership in the society.

A report of plans for the 1926 state convention to be held in this city was made by G. B. Wylie, who is general chairman of the convention.

It was announced at the meeting that Dr. Albert Keidel, eminent Baltimore, Md., surgeon and connected with the Johns Hopkins University, will deliver a lecture to the county physicians at their next monthly meeting to be held January 5.

Brooke County

The following officers have been elected by the Brooke County Medical Society:

W. T. Booher, Wellsburg, president.

H. F. Nolte, Beech Bottom, vice president.

F. L. Matson, Wellsburg, secretary-treasurer.

Doctors Booher, Nolte and Matson will serve during 1926.

Eastern Panhandle Society

At the regular meeting of the Eastern Panhandle Medical society, held at Martinsburg December 9, the following officers were elected to serve for one year:

President, Clifford Sperow, Martinsburg.

Vice president, W. A. Wallace, Martinsburg.

Secretary-treasurer, Victor Glover, Martinsburg.

Delegate to annual meeting, J. A. Duff of Martinsburg; alternate, G. P. Morison of Martinsburg.

STATE AND GENERAL NEWS NOTES

WILL ORGANIZE TRI-STATE MEDICAL SOCIETY JAN. 28

Plans have been formulated for the organization of a Tri-State Medical society to include members of the medical profession in that area contributory to Huntington, W. Va., Ashland, Ky., and the Ironton-Portsmouth-Chillicothe area in Ohio. The organization meeting will be conducted January 28 in Hotel Pritchard, Huntington. Presidents of the West Virginia, Kentucky and Ohio medical associations are to be in attendance as are other officials of the organizations in the three states.

The program, at this writing, is not complete but indications are that it will be of the highest calibre. Thus far, speakers include:

Paul H. Ringer, Asheville, N. C., will speak on "Pitfalls in the Diagnosis of Tuberculosis."

Clifford H. Grulee of Chicago, will speak on "Differential Diagnosis of Abdominal Pain in Children."

Also, a surgeon of national prominence and a roentgenologist of note will be on the program.

Oscar Biern of Huntington, is chairman of the organization committee and F. O. Marple is secretary.

Sessions are to open at 2 p. m. There will be two or three papers in the afternoon, at 6 p. m. a banquet will be held at which a permanent organization will be formed and there will be one paper following the banquet.

Tentative plans call for four meetings a year with an annual membership fee of $2. Thus each meeting would cost a member but 50 cents. This money is to be used to defray the cost of obtaining speakers. It is planned that meetings rotate from city to city in the area that comprises the new society.

All inquiries should be addressed to Dr. Oscar Biern, chairman, Professional buildinf, Huntington. Doctors from all of West Virginia are invited, particularly those in the southern tier of counties.

CHILD MUST LEARN TO PLAY NORMALLY

Child Guidance Clinics Save Adults from Nervous Breakdown

Your child should be trained to play with normal boys and girls in a normal way if you wish him to develop the correct emotional attitude toward life.

So says Dr. Smiley Blanton, director of the Minneapolis Child Guidance Clinic, who writes about the work of the clinic in the *Hygeia*, popular health magazine published by the American Medical Association.

Mental Hygiene Necessary

When children are 4 or 5 years of age—when they become seclusive, daydream or become self-centered and vindictive — they should be taught mental hygiene.

The laws of mental hygiene are just as definite and clear-cut as the laws of physical hygiene. Parents realize that they must have knowledge of the laws of physical health if they wish their children to develop healthy bodies. It is just as necessary that parents have some knowledge of the laws governing the mental life of their children if they wish their children to develop healthy minds.

The meaning of the term "mental hygiene" is not so well known as the term "physical hygiene." Many people think that mental hygiene deals only with individuals suffering from some mental disease, or they think that mental hygiene refers to the treatment and education of the feebleminded.

Although mental hygiene concerns itself with these matters, this is only a part of the story. Mental hygiene teaches the child to adjust himself in a healthy manner to the world in which he lives.

Early Training Bad

All of the infant's early training tends to make him selfish and self-centered; he tries to get what he wants by every means in his power. But as the child grows older he must

be trained to consider not only his own desires but the desires of others. He must learn to adapt himself to the needs and wants of society. Up to this point he has been a king and often a king very difficult to get along with, but sooner or later he has to step down from his throne and it is the process of teaching him how to get along as a subject instead of a king that is the important job of parents.

Serves Parents and Child

The child guidance clinic serves a useful purpose in helping to prevent actual nervous breakdowns. It also serves a useful purpose in helping the average, normal child grow up without unfortunate emotional attitudes and conflicts, without feeling of timidity or inability to make friends, and without feelings of inferiority that would prevent him from making a success of life.

———o———

Sidelights on Intravenious Medication

In the majority of cases the purpose of the administration of drugs, whatever the mode of entrance into the organism, is to have them reach the circulation and thus become distributed to the organs and tissues. Absorption may be regarded as a circuitous process leading to this end. However, it is measurably slow, so that the drug is distributed gradually rather than suddenly. When the introduction is by way of the alimentary tract, the peculiarities of the portal circulation are such as to compel most of the absorbed products to pass through the liver prior to discharge into the systemic blood stream. Direct intravenous injection involves difficulties of technic, with the possibility of local injuries to the peripheral blood vessels at the seat of operation. It presents dangers of bacterial contamination; the vehicle as well as the drug is immediately foreign to the blood, and other objections have presented themselves. The Council on Pharmacy and Chemistry has taken a decidedly conservative attitude toward the recognition of the scores of products intended for direct intravenous use. The wisdom of this stand has been attested anew by a recent report of Hanzlik [5] of the Stanford University School of Medicine. Intravenous injections of a large variety of substances cause definite and important changes in arterial blood, accompanied as a rule by disturbances in physiologic functions. In experimental animals, upsets in these processes were indicated from changes in blood pressure and in pulse and respiratory rates, ranging from moderate to profound, and frequently resulting in collapse and sometimes in death. Hanzlik has suggested that the basis of the blood and symptomatic changes that resulted from contact with a variety of agents physically and chemically unrelated rests fundamentally on disturbances in important physical and chemical mechanisms of the blood and tissues. It should be noted that many of the untoward effects described are not attributable to the mere toxic properties of the substances tested, for they do not usually behave in the same way when otherwise administered. It is true, of course, that some products are intentionally introduced so as to produce marked systemic reactions, as in the so-called nonspecific protein therapy. Our ignorance in this field still demands the greatest caution and conservatism.[6] As Hanzlik expresses it, the burden of proof rests on those who assert that intravenous injections are not injurious or dangerous.—*Jour. A. M. A.* Nov. 21, 1925.

5. Hanzlik, P. J.; De Eds, F., and Tainter, M. L.: Blood and Symptomatic Changes Following the Intravenous Administration of a Variety of Agents and Solutions, Arch. Int. Med. 36 : 447 (Oct.) 1925.

6. Hanzlik, P. J.; Blood and Tissue Changes in Anaphylactoid Reactions, California & West, Med. 23 : 161 (Feb.) 1925.

———o———

INTERNISTS TO GATHER AT DETROIT OR CLINICAL WEEK

The largest and most important assemblage of internists on the Western continent is anticipated in Detroit February 22-27 when the American Congress on Internal Medicine will conduct its annual clinical week. Sessions also will be conducted at Ann Arbor, Mich., seat of learning of the University of Michigan. Headquarters will be at the Book-Cadillac hotel, Detroit, and reservations should be made at once. Frank Smithies, M. D., 920 N. Michigan avenue, Chicago, is secretary-general and all inquiries should be addressed to him.

COMPOSITION OF IMPORTED BOTTLED WATERS

During the fifteen years prior to the beginning of the World War in 1914, the annual receipts of foreign mineral waters amounted to about 3,000,000 gallons, valued at about $1,000,000. There was a marked decrease in receipts during the World War and for several years thereafter, but since 1920 there has been a gradual increase. During the twelve months ending in June, 1924, there were imported 753,831 gallons, valued at $281,402. The value of domestic waters sold annually during the last twenty-five years has remained about the same, that is, in the neighborhood of $5,000,000. In an examination of hundreds of foreign and domestic waters, A. E. Mix and J. W. Sale, Washington, D. C. (*Journal A. M. A.*, Dec. 19, 1925), have observed that most of them can be placed in one or another of the following five classes, when the analyses are expressed in the form of salts:

Class 1. Dolomitic limestone predominating.

Class 2. Vichy type, sodium bicarbonate predominating.

Class 3. Sodium chlorid predominating.

Class 4. Epsom and Glauber's salts, one or both predominating.

Class 5. Chalybeate or iron type.

The names of these five classes indicate quite clearly the general character of the mineral waters placed in them, but they do not show the approximate quantity of the dissolved mineral matter in a given quantity of the water. Therefore, the five classes described above have been further subdivided into (a) those waters which contain less than 1,000 mg. per liter (or less than 58 grains per U. S. gallon); (b) from 1,000 to 5,000 mg. per liter (or from 58 to 292 grains per U. S. gallon); (c) from 5,000 to 10,000 mg. per liter (or from 292 to 584 grains per U. S. gallon); (d) from 10,000 to 20,000 mg. per liter (or from 584 to 1,168 grains per U. S. gallon); (e) over 20,000 mg. per liter (or over 1,168 grains per U. S. gallon). Mineral matter in the waters in Class 1 consists chiefly of limestone (calcium carbonate) or of dolomitic limestone (calcium, magnesium carbonate) held in solution by carbon dioxid, which is usually present in sufficient quantity to prevent precipitation, especially when the bottles are kept closed. Waters of this class are usually rather lightly mineralized and are quite generally employed whenever light, mildly alkaline waters are indicated. Class 2 comprises the Vichy type of waters, in which bicarbonate of soda is the predominating mineral constituent. They usually contain also a considerable amount of sodium chlorid, together with smaller amounts of a great variety of other salts. Class 3 consists of waters in which sodium chlorid predominates. Some of the waters in this class, like those in Class 4, are very highly mineralized. Class 4 comprises those waters in which the dissolved mineral matter consists chiefly of Epsom and Glauber's salts. They are frequently called bitter waters. Class 5 consists of waters that contain substantial amounts of iron salts. Included in this class are all of those waters which contain 10 mg. or more per liter (or 58/100 grain or more per U. S. gallon) of iron salts. These waters are termed chalybeate or red waters. The iron is present usually as ferrous bicarbonate and is held in solution by carbon dioxid. When the carbon dioxid escapes, the iron precipitates in the form of ferric oxid. In order to keep bottled waters of this type clear and sparkling it is necessary to bottle them with an abundance of carbon dioxid and to exclude carefully all traces of oxygen. A list of all foreign waters analyzed by the Bureau of Chemistry since the beginning of the enforcement of the federal Food and Drugs Act in 1907, classified in the manner described above, is set forth.

Hematoma Occurring Spontaneously In Sheath of Rectus Abdominis Muscle

Carey Culbertson, Chicago (*Journal, A. M. A.*, Dec. 19, 1925), considers the gynecologic and obstetric significance of hematoma occurring spontaneously in sheath of rectus abdominis muscle and reports two cases. A consideration of such cases as have occurred in women shows that rectus hematoma bears a strong resemblance, symptomatically, to intraperitoneal or pelvic disease. Further evidence of the obstetric importance of this condition is seen in the fact that the majority of the patients not pregnant had borne children. Twelve were pregnant or recently delivered, at the time the rupture took place. Of the twenty-nine others, fifteen had had children, the parity of thirteen was not stated, and only one was set down as a nullipara. Of the twenty-nine who were not pregnant, thirteen were over 50 years of age, seven between 40 and 50 and six under 40. The ages of three were not stated. Coughing due to bronchitis or influenza was given as the immediate causal factor in eleven cases, ordinary bodily movements in five and unusual muscular exertion, in the form of hard work, in six. No apparent cause (muscular effort) was seen in three cases, and in two others there was a struggle to keep the balance in falling. Vomiting preceded the rupture in one patient, and in only one was participation in athletic exercise the factor. Arteriosclerosis was a known condition in one patient, heart disease had been present in two, and hemiplegia had occurred sometime previously in one other. Obesity was emphasized in nine of the reports, but in nineteen the constitutional build was not stated. One patient was not obese. One of the outstanding features is that of diagnosis, in most cases the true condition not being recognized prior to operation. In six cases the diagnosis was that of appendicitis; in seven ovarian cyst with twisted pedicle; in two, appendicitis or ovarian cyst; in two, ovarian tumor, and in two, gallbladder disease. In three cases the preoperative diagnosis was not stated. In one case each the condition was thought to be mesenteric embolism, intraperitoneal disease, intestinal obstruction, abdominal hernia, desmoid tumor and ectopic pregnancy. In only three cases was rectus hematoma diagnosed, and in only two others was it suspected. The treatment is conservative, if the hematoma is small. If the accumulation of blood is large enough to require evacuation, if it has become infected or if it has ruptured into the peritoneal cavity, operative intervention is indicated.

DOCTORS GUTHRIE AND RUTHERFORD RENAMED

Superintendents of two state-owned hospitals have been reappointed by Governor Howard M. Gore. They are Dr. L. V. Guthrie, superintendent of the Huntington State Hospital for the Insane, and Dr. A. G. Rutherford, superintendent of Welch Hospital No. 1, at Welch, McDowell county.

Dr. Guthrie received his sixth appointment. He was first designated superintendent of the Huntington institution by Governor Albert B. White. He has continued in office for more than twenty years. He has been active in the state medical association for many years.

Dr. Rutherford was appointed by Governor Morgan four years ago, relinquishing a practice at Red Jacket, W. Va., to accept the post. He is president of the McDowell County Medical society for 1926; he was secretary of it in 1925 when it had an active year, and he is a member of the state association's professional relations committee.

BOOK REVIEW

The Art and Practice of Medical Writing, by Simmons and Fishbein, (A. M. A. Press). This little volume was prepared for the benefit of those who would write medical papers for publication. It is written in terse, compact style and especially commendable are the chapters on "An Acceptable Paper," and Style, Words and Construction of Manuscripts. The short chapter on prescriptions alone makes this publication worthy of a place on any physician's desk.—C. A. R.

The Influence of Focal Infections

Notwithstanding that this paper by D. J. McCarthy, Philadelphia (*Journal, A. M. A.*, Dec. 19, 1925), is the result of a careful analysis of 500 of his own cases, all studied in detail by one clinician, the opinions in reference to the influence of the focal infections, even in this group, are the impressions made on him by the results obtained in treatment, and, he says, are by no means facts, or to be taken as complete conclusive evidence of the direct causative relationship of focal infections to nervous or mental disease. McCarthy lays it down as a fundamental principle of therapeutics in mental and nervous diseases that, unless one has a definite theory of disease to work on, one need not expect results; to treat a mental state by drugs or psychotherapy, is to do little less than the Christian scientist would do in the same cases. He holds that a man or woman who was sane, had always been sane up to one month ago and is now insane, so insane, indeed, that he or she is in grave danger of confinement to an insane asylum, must have some real cause for this condition, and that this cause must be a definite chemical poisoning, either bacterial or visceral in nature. Focal infections in the upper respiratory tract are present in a sufficiently large percentage of cases of the psychoses and neuroses to warrant the assumption of a causal relationship between the focal infections and the disease conditions of the nervous system. Focal infections of and by themselves are probably the cause of the psychotic or psychoneurotic condition in only a relatively small percentage of cases. In the vast majority of cases, the focal infections process acts on an already existing condition of undernutrition, anemia, endocrine imbalance, etc. Focal infections appear to produce much more marked nervous symptoms and to produce them with a greater frequency in individuals with arterial hypotension than in those with normal blood pressure or an arterial hypertension. This is, in all probability, an endocrine reaction.

BUSINESS GIRL NEEDS WALKING

A daily walk of at least an hour in addition to regular exercise is urged for adults by Lydia Clark, director of physical education for women, Ohio State University. Miss Clark writes in a recent issue of *Hygeia*.

While walking, proper carriage and alignment of the body should be maintained, and attention should be given to the following points:

1. Remember that the foot is flexible and that the body weight should be carried from the heel through the arch to the ball of the foot.

2. The weight should be carried toward the outside of the foot. This will prevent a "duck waddle" walk.

3. The body should be made as tall as possible without raising the shoulders.

4. When the weight is properly adjusted and a feeling of being tall is maintained, the head, chest, and abdomen will usually fall into a correct position and the "debutante slump" and the "middle age hump" will soon fade into oblivion.

———o———

TOTAL AND SUBTOTAL RESTORATION OF NOSE

To be acceptable, a surgically reconstructed nose, says Vilray P. Blair, St. Louis (*Journal A. M. A.*, Dec. 19, 1925), must be be covered with smooth skin, have a normal contour, have an epithelial lining, and provide an adequate airway. Though not always necessary, a rigid support of bone or cartilage will usually add to the quality of the result. It is very desirable that the size and form of the new nose be in harmony with the particular face. Nasal reconstruction amounts to sculpturing with the live tissues for material, and this must be done in conformity with good surgical usage, combined with mechanical accuracy and some artistic feeling. Blair describes his method of procedure.

Adiposis Dolorosa (Dercum's Disease)

N. W. Winkelman, Philadelphia, and John L. Eckel, Buffalo (*Journal, A. M. A.*, Dec. 19, 1925), report one case and review briefly fifteen cases cited in the literature. The case described fits in with the generally recognized syndrome of Dercum's disease, showing the following features: (1) obesity (exclusive of face, hands and feet), weight 460 pounds (208 kg.), with painful masses; (2) ulcers on the legs and bullae on the fingers, and (3) asthenia. The pathologic findings were an adenoma of the anterior lobe of the pituitary body with enlargement of the sella turcica, an adematous hyperplasia of the left suprarenal, atrophy of the ovaries, and many recent hemorrhages in the thalamus and subthalamic regions. On reviewing the necropsy findings of the fifteen cases in the literature, one is impressed by the pluriglandular involvement in most of the cases. In only two cases were there no definite changes in the ductless glands (Rome and Falta). Of the eleven patients in whom the pituitary body was examined, eight showed definite alterations; the thyriod was abnormal in twelve cases; the sex glands were pathologic in nine; the suprarenal in three, and the pancreas in two. The author's own case showed pituitary, suprarenal and ovarian pathologic changes. It is of interest from a clinical standpoint to note that the condition is five times more prevalent in the female and that most cases develop after the age of 35. The theory of endocrine malfunction seems best suited to explain the symptoms in this case.

———o———

MAKE HASTE SLOWLY WITH BROKEN ARM

A simple fracture of an arm or leg can be made compound by carelessness. A compound fracture means broken skin and a portal of entry for bacteria to an injured site where germs multiply rapidly.

While a few hours are of consequence when one has pain in the stomach from early acute appendicitis, and when one has a sore throat and beginning diphtheria, they are not of great moment in a fracture of an arm.—*Hygeia.*

Action of Pituitary Extract on Uterus

The action of pituitary extract on the uterus, M. Pierce Rucker, Richmond, Va. (*Journal A. M. A.*, Nov. 21, 1925), shows, is quite characteristic. It never gives contractions with periods of rest between, but always a continuous series of contractions with increase in intra-uterine pressure. This action was illustrated in a case of inevitable abortion in which labor was induced in the the fourth month with a number 3 Voorhees bag. The patient was given one-fourth grain (0.0162 gm.) of morphin and 1/150 grain of atrophin at 1:30 p. m. At 8 p. m. she was having painless contraction of the uterus that averaged 10 mm. of mercury at intervals of two minutes. She was given 5 minims (0.3 c.c.) of pituitary extract subcutaneously. Five minutes later, there was a characteristic pituitary extract action. The contractions increased in height only very slightly but were continuous one after another, without any period of rest. Twenty-two minutes elapsed before there was the slightest pause between contractions. The intra-uterine pressure was increased 6 mm. of mercury. The patient still felt no pain. In other words, here was a dose so small (considering the stage of pregnancy) that it caused no action clinically, and yet it produced an incomplete tetanus of the uterus.

———o———

Therapeutic Results with Concentrated Scarlet Fever Antitoxin

George F. Dick and Gladys H. Dick, Chicago (*Journal A. M. A.*, Nov. 28, 1925), have shown that the scarlet fever antitoxin is of value. Their patents showed a temporary improvement following administration of the antitoxin, but eventually died. These results show that concentrated scarlet fever antitoxin is of practical therapeutic value. They emphasize the necessity of giving the antitoxin early in the disease before complications have occurred, and before too much damage has been done to the tissues. If administered early in the disease, and in adequate dosage, the antitoxin shortens the course of scarlet fever and reduces the number of complications and sequelae.

GOITER PROPHYLAXIS

Less than a decade has passed since systematic measures for the prevention of simple goiter have been instituted on a large scale in this country in regions where the incidence of such thyroid enlargement directs attention to the local possibilities of "disease due to iodin starvation." Iodin preparations of one sort or another have been employed either unwittingly or in a desultory way in the relief of goiter for many years; but it remained for the investigations of Marine and Kimball, beginning about 1917, to furnish a firm foundation for the current prophylactic practices. Thyroid disease is a many headed monster that has often been attacked in the past as if it were a uniform single entity to be overcome. At no time has the importance of accurate differential diagnosis been more urgent than in these days, when not only medical but also lay publications resound the importance of goiter prophylaxis and present volumes of testimony as to to beneficent effectiveness of the attempts already undertaken in this field. As an illustration of the direction followed by the current enthusiasm, the recently advocated conclusions of Hathaway [1] may be cited. He insists that a program that would control the goiter situation should include detailed surveys of all localities where the disorder is suspected; this is the basis for all successful methods of goiter prevention. He recommends the institution of treatment with sodium iodid of the water supplies of all cities and towns that prove to be goitrous; and he adds that small villages not having a common water supply and rural communities must have the iodin supplied by the use of iodized table salt or by iodin tablets of some kind.

There is admittedly much warrant for such recommendations, which have in fact already been put into operation in certain communities under the sanction of competent professional advisers. Medication for the masses and therapy on a wholesome basis —even uniformity of health-promoting recommendations—call for careful consideration. Exercise that is in general admittedly wholesome is by no means always advisable for every member of the family. Cold air is no longer looked on as a universal panacea, even in pneumonia. "One man's meat is another man's poison" is an old saying with modern implications; to this the varied manifestations of allergy bear witness. May it not be well, therefore, for the medical profession to proceed with due caution in the commendable program of goiter prevention, particularly in view of the fact that its advice is likely to be followed with undue enthusiasm by lay followers who are not accustomed to pay attention to exceptions from a wholesale rule? They often forget the importance of adopting recommendations "with a grain of salt;" all too often they pursue the policy which assumes that if a little is good, more ought to be better.

Experienced students of the goiter problem are issuing corrective warnings, but their concern should not be interpreted as dampening the ardor for the possibilities of preventive measures at this time. A highly important movement for health promotion must not be menaced by possible harm from overenthusiasm. Thus Jackson,[2] who writes from Wisconsin with the conviction of an observer within the "goiter belt" asserts contrary to reports from other sources, that the number of cases of hyperthyroidism has greatly increased as a result of the popular demand for iodin in the treatment of goiter. Consequently, he advises that the element should not be distributed promiscuously either in water or salt, but should be administered in exact amounts and under a physician's orders. Jackson insists that even minute amounts of iodin are sufficient to initiate symptoms of hyperthyroidism in certain persons with adenomatous goiters. Iodin should be administered, he adds, with particular care to children with adenomatous goiters; it should never be given to adults with this condition.

Likewise Kimball,[3] recognizing that "there is no consistent pathology of goiter," has expressed the message of caution to the readers of *The Journal.* His own studies show that toxic goiters may result from the use of iodized salt in cases of adenomas of long standing; he adds, however, that these cases may be entirely coincidental, and that too much emphasis should not be placed on this point. Instead of advocating promiscuous wholesale administration, Kimball urges that in all cases of iodin treatment the dosage should be considered in terms of milligrams. The maximum dosage for an adult, provided there are no contraindications, is 10 mg. daily for not longer than one month, during which time the patients should be under very close observation. Kimball believes that there is no danger in the routine prophylaxis of goiter as it is carried out through the schools; namely, the administration of 10 mg. of iodin weekly.

The evaluation of the use of iodin in hyperthyroidism belongs in a separate category, as was recently pointed out in *The Journal.*[4] Within the last two years the use of iodin in the treatment of exophthalmic goiter has attained a new vogue.[5] This is, of course, a procedure quite different from the now familiar prophylactic use of iodin in relation to adolescent goiter. The claims for its application in exophthalmic goiter are that the drug will produce abrupt remission in most cases. The remission is often as rapid and as extensive as that following subtotal thyroidectomy. However, iodin alone as now used has not been shown to be sufficient to suppress the disease permanently. After a patient with exophthalmic goiter has been taking the drug, a rapid rise of metabolic rate and increase of toxic symptoms may occur within one or two weeks if the iodin is stopped. Furthermore, in some cases of exophthalmic goiter, iodin has no observable effect. According to Rienhoff,[6] the artificial remission of the condition, as it is produced by iodin, is associated with a change of the thyroid from a hyperplastic to a colloid state. Obvious variations may occur through a very wide range of coincident clinical and structural possibilities. Such studies greatly enhance the opportunity to approach the problem of choice of therapy with greater intelligence.—*Journal A. M. A.*, Dec. 19, 1925.

1. Hathaway, J. C.: The Prevention of Simple Goiter, Am. J. M. Sc. 170:1 (July) 1925.

2. Jackson, A. S.: Iodin Hyperthyroidism, Am. J. M. Sc. 170:271 (Aug.) 1925.

3. Kimball, O. P.: Induced Hyperthyroidism, J. A. M. A. 85:1709 (Nov. 28) 1925.

4. Evaluation of Present Status of Iodin in Hyperthyroidism, Current Comment, J. A. M. A. 85:1732 (Nov. 28) 1925.

5. Plummer, H. S.: Results of Administering Iodin to Patients Having Exophthalmic Goiter, J. A. M. A., 80:1955 (June 30) 1923. Starr, P.: Walcott, H. P.; Segall, H. N., and Means, J. H: The Effect of Iodin in Exophthalmic Goiter, Arch. Int. Med. 34:355 (Sept.) 1924. Plummer, H. S., and Boothby, W. M. The Value of Iodin in Exophthalmic Goiter, J. Iowa M. Soc. 14:66 (Feb.) 1924. Fraser, F. R.: Iodine in Exophthalmic Goiter, Brit. M. J. 1:1 (Jan. 3) 1925. Kimball, O P.: Induced Hyperthyroidism, J. A. M. A. 85:1709 (Nov. 28) 1925. Pemberton, J. deJ.: Present-Day Surgical Treatment of Diseases of the Thyroid Gland, J. A. M. A. 85:1882 (Dec. 12) 1925.

6. Rienhoff, W. F., Jr: The Histological Changes Brought About in Cases of Exophthalmic Goiter by the Administration of Iodine, Bull. Johns Hopkins Hosp. 37:285 (Nov.) 1925.

Subtotal Gastrectomy

Subtotal gastrectomy in the opinion of John B. Deaver, Philadelphia (*Journal A. M. A.*, Nov. 21, 1925), is the operation of choice in benign disorders of the stomach and duodenum, chronic ulcer, its sequelae, hourglass stomach, pyloric stenosis and secondary or marginal ulcer. The rationale of subtotal gastrectomy for gastric ulcer, duodenal ulcer and early carcinoma is the removal of the pathologic condition, along with the acid-bearing portion of the stomach, thus materially lessening, if not preventing, the sequelae—future ulcer formation, which too often follows the more palliative and less operative procedures. In Deaver's experience, the hyperacidity which is a feature before operation is much reduced, and may even be entirely absent after a subtotal gastrectomy, as shown by the fractional test meal. Furthermore, he has never seen marginal ulcer follow subtotal gastrectomy for early carcinoma. Deaver emphasizes the fact that the problems as to etiology, as to course, as to healing, as to change in the physiology of the stomach, and as t otreatment are all in an opinionated state. The experimental evidence to date is subject to many ifs. Many of the clinical reports are valueless.

SUNSHINE AND HEALTH

There is something appealing in the doctrine of the healthfulness of fresh air and sunshine. It almost seems as though they represent instinctive preferences on the part of mankind so far as modes of living are concerned. These atmospheric factors play a large part in the propaganda of medical climatology, yet it has not been easy to define their potencies in terms of concrete benefits or to describe their functions in the language of scientific endeavor. The demonstration that the sun's rays may destroy certain microorganisms was welcomed, for it gave the semblance of tangible advantage to sunlight. The antirachitic effects of exposure to sunlight discovered during the last few years indicate the therapeutic and prophylactic efficacy of sunlit air. Hope has been awakened of further advantages to be learned, and warnings have even been issued against the possible harmfulness of overexposure to such types of radiation in the belief that it may be healthful, curative or even injurious, depending on the "dosage."

Among the slowly growing accumulation of measurable facts are data on the interrelation of rickets and rachitic predisposition to climatic factors. This has been stressed before in *The Journal.*[1] It is not easy to evaluate correctly the relative importance of diet and environment in this connection, especially since the food intake is likely to alter with the seasons and geographic locations, so that what is ascribed to sunshine may in fact be associated with better nutrition depending on dietary changes. Among the recent statistics relating to the composition of the blood—a good index of rachitic tendencies—the data of Riesenfeld, Handelman and Rose[2] are significant. More than a thousand determinations of organic phosphorus were made on the blood of mothers and their new-born infants. The investigation extended over a period of fourteen consecutive months, and the data obtained were correlated with the factors causative of rickets. No significant difference was found between the average inorganic phosphorus of the white and negro mothers or of their infants. The inorganic phosphorus of the blood of the new-born infant was not affected by the previous habitat of the mother (that is, tropics or temperate zone). The time the mother spent outdoors during gestation showed no influence on the inorganic phosphorus of the infant's blood. The diet of the mother was one of the controlling factors of the inorganic phosphorus content of the blood of the new-born infants. However, a definite seasonal variation of inorganic phosphorus was noted, which is in harmony with the recognized seasonal incidence of rickets. The curves of available sunlight hours and inorganic phosphorus of the new-born infant are parallel in the latter half of the year, the points of resemblance in the sunlight curve preceding that of the inorganic phosphorus curve by one month.

According to these observers, individual sunlight exposure and the available sunlight in the community were not found to be such obvious causative factors in the inorganic phosphorus of the infant as we are led to expect from the current literature on rickets. On the other hand, these experimenters believe that the relative humidity is strikingly associated with the rise and fall of the average inorganic phosphorus of the infant's blood. In the past, this relation between the humidity and blood phosphorus concentration has not been emphasized. It is suggested that moisture and precipitation may intensify the effect of the ultraviolet rays by increasing their concentration.

In further emphasis of the interrelation of climate and bone development, Moore and Dennis [3] of Portland, Ore., have observed that craniotabes is more prevalent in the Pacific Northwest than in sections of the country having more sunshine. It occurs most frequently during the months of March and April, also being most severe in the spring months. Thus the seasonal incidence of craniotabes in such regions is the same as that of undisputed signs of rickets.—*Jour. A. M. A.*, Dec. 19, 1925.

1. Hess, A. F.: The Ultraviolet Rays of the Sun, J. A. M. A. 84 : 1033 (April 4) 1925. The Antirachitic Vitamin, editorial, ibid. 85 : 976 (Sept. 26) 1925.

2. Riesenfeld, E. A.: Handelman, Isidore! and Rose, A. R.: Inorganic Phosphorus in the Blood of the New-Born, Am. J. Dis. Child. 30 : 646 (Nov.) 1925.

3. Moore, C. U., and Dennis, H. G.: Craniotabes: Its Prevalence and Significance, Am. J. Dis. Child. 30 : 683 (Nov.) 1925.

URINARY CALCULI

The chemical composition and structure of urinary calculi in relation to radiography is discussed by Daniel E. Shea, Hartford, Conn. (*Journal A. M. A.*, Dec. 19, 1925). He says that the relative opacity of a urinary calculus depends on the total molecular or atomic weights of its constituents and is influenced by its structure and thickness. Some urinary calculi having constituents of low atomic weights are negative to the roentgen ray. These include stones composed of uric acid, urates and triple phosphate. The diagnosis of urinary calculi should not be guided entirely by radiographic reports. Cystoscopy and urography are very necessary as well as valuable adjuncts in the diagnosis of urinary calculi.

Impacted Calculi of the Ureter

The treatment employed and the results obtained in sixty cases of impacted calculi of the ureter are presented by Alexander Hamilton Peacock, Seattle (*Journal A. M. A.*, Dec. 19, 1925). He says that while many ureteral calculi will pass through the ureter and be safely conducted to the bladder, a number of them will become impacted in the ureter. They are held in the ureter very often by such pathologic conditions as stricture, the size of the calculus, or the rough and crystal-like surface of the stone. The impacted calculi often remain in the ureter for years, and in this series of cases the average length of time was nine years. A calculus, once impacted, blocks off the urine, produces pain, pressure, dilation of the ureter and renal pelvis, keeps up inflammation of the mucous membrane, and in time impairs the function of the kidney. These impacted calculi cause the patient to suffer intermittent or continuous pain for years, constantly threatening him with colic; as a result, the general health is markedly impaired. Stricture of the ureter plays a considerable role in the impaction of the calculi, being found in 18 per cent of the cases. Contrary to previous teaching, I have not found a normal constriction of the ureter except in the lower third, where the ureter travels through the bladder wall. The staphylococcus plays an important role in the formation of the stones, as it was found in 47.5 per cent of all the stone cases. Hematuria, either as microscopic or as red corpuscles, occurred in 94 per cent of the cases. Sixty-seven per cent of all the impacted calculi were in the lower third of the ureter. Impacted calculi are apparently a disease of middle life, the average age of the patients being 43 years. In 96 per cent of the cases, the calculi were solitary. Ureteral dilation should be attempted first, as this method was successful in 50 per cent of the cases. Extraperitoneal ureterolithotomy should be performed when ureteral dilation has failed.

FURUNCLE OF THE NOSE

Thomas J. Harris, New York (*Journal, A. M. A.*, Dec. 19, 1925), reports a case of furuncle of the nose resulting in septicemia, which was treated successfully by injections of mercurochrome. This case is instructive on a number of accounts. First, because of the etiology—an innocent appearing pimple in the nose of a healthy young girl following an incision on the third day gave rise to a swelling which extended to the cheek and eye, accompanied by high fever. There were numerous foci of suppuration with staphylococcus infection of the blood, septic pneumonia and endocarditis, with recovery at the end of two months. Except for the fortunate recovery, the history of the case is not unusual. In the judgment of all who observed the case, the final recovery was due to the use of mercurochrome-220 soluble, 5 mg. per kilogram of the body weight in a 1 per cent solution, as recommended by Young. In all, four injections were given, none of them followed by any untoward results. In spite of the fact that there are cases on record of acute nephritis following its use, any unqualified statement that the cure was due to the mercurochrome cannot be made because of the fact that the patient had two transfusions. However, Harris strongly recommends its use under similar circumstances.

DEATHS

Charles B. Lee

Dr. Charles B. Lee of Glen Jean, Fayette county, for many years an active member of the West Virginia State Medical association, died suddenly in Philadelphia. Burial rites were said in Charleston.

Dr. Lee was widely known in southern West Virginia. Graduating from Louisville Medical college in 1891, he obtained his license to practice in West Virginia in 1893. Shortly thereafter he became affiliated with the state medical association and retained an active interest in its endeavors continuously thereafter.

Besides Mrs. Lee, who was seriously ill in Philadelphia at the time of her husband's death, one son survives. His name is Charles Lee and he resides in Charlottesville, Va. The family made their home in Charleston for many years before Dr. Lee established his practice at Glen Jean.

C. E. Wilkinson

Dr. Carlos Eugene Wilkinson was born near Wayne County Court House July 1, 1877, died November 23, 1925, aged 48 years, 4 months and 23 days at Bruceton Mills, Preston county.

He was united in marriage to Lulu McGinnis, February 1, 1906. To this union was born one son, Renick, who is now a student in the West Virginia University.

Doctor Wilkinson went to Preston county, in 1903, and built up a large practice in the medical profession, and for 22 years was busily engaged in this work. In heeding the many calls that came to him, he endured many hardships in traveling over bad roads through inclement weather. He will be greatly missed in the community in which he worked so long.

He joined the Methodist Episcopal church a number of years ago, and was one of its strong financial supporters all these years.

He was stricken with paralysis last spring from which he only partially recovered. On November 14th he was stricken again and this stroke proved fatal.

He leaves his wife, son, father, mother, one brother, and a host of friends.

Services were conducted at his home in Bruceton Mills by his pastor, Rev. J. E. Johnson, assisted by Rev. Jeremiah Thomas, after which the body was taken to Wayne, where burial was in the family cemetery at Elmwood.

---o---

CRIPPLED CHILD CENSUS COMMENCED BY HENSHAW

Dr. W. T. Henshaw, state health commissioner, announces that work has begun to take a crippled child census in West Virginia. The state department of health is cooperating with the state department of schools in the work. Questionnaires have been sent to all school teachers asking them to report the names and addresses of any crippled children in their school zones, and also give the age and nature of the child's deformity.

The medical profession is to be asked to cooperate in this census so that eventually a complete and accurate record of every crippled child will be available for the recently created Crippled Children's Council. This new state organization was formed under an act of the recent legislature but the lawmakers failed to provide the necessary funds for its maintenance. The legislature said, in substance: "Tell us how many crippled children there are and then we will be in position to make an appropriation suitable to carry on the work."

Accordingly, to offset delay, the two state departments are cooperating in making the census. Rotary clubs of the state are behind the move to hospitalize the crippled child and a number of members of the state association have been taking an active interest in the work.

WHAT TO DO FOR BROKEN ARM

When Johnny breaks an arm it is best to use no local applications at all, either hot or cold, says Dr. Richard E. Stifel, writing in *Hygiea*, popular health magazine published by the American Medical Association.

Do not remove the clothing. The arm should be placed on a pillow; an ordinary sofa pillow or small bed pillow does very well. The edges of the pillow should be gently lifted around the arm and held in place by several straps or pieces of cord tied about it to form a sort of bundle. The patient should be made to lie down. Hot coffee may be given if he is faint. The doctor should then be notified.

When a leg is broken there is need for a cool head. On no account should the patient be helped to his feet or permitted to try to stand. Unless a stretcher is available, it is best not to attempt to move him until the broken limb has been temporarily protected. below the knee. Corrugated packing paper wrapped around the leg and tied in place by pieces of cord or handkerchiefs is often useful. When the fracture is in the shaft of the bone above the knee, the old-fashioned umbrella or walking stick splint is worth knowing about. In this case, one umbrella is laid along the outer side and one along the inner side of the leg and both are firmly strapped to the limb. As soon as the patient is in bed and the pain has lessened, the straps should be loosened. Tight bandages should always be avoided in fractures. The circulation of the limb must have no interference.

MEDICAL TEST DATE FIXED

The next state examination for those seeking licenses to practice medicine will be held in Charleston January 19, 20 and 21, Dr. W. T. Henshaw, commissioner of health and ex-officio secretary of the health council, announces. Three examinations are held each year—in January, July and October. Whether or not it will be necessary to arrange for an examination of chiropractors in January is not yet known, Dr. Henshaw said.

HERE ARE TEN RULES FOR HEALTH

1. Stand and sit correctly.
2. Sleep eight to nine hours with open windows.
3. Drink six glasses of water each day.
4. Exercise one hour daily; if possible, take up some sport.
5. Eat some green vegetable and fruit each day.
6. Evacuate the bowels daily.
7. Have a hobby which will change your mental outlook.
8. Leave your business worries at the office, and learn to play.
9. Relax when sitting or lying down.
10. Have a yearly physical examination.

The above rules accompany the exercises for the business woman which are a feature of the November issue of *Hygeia*, popular health magazine published by the American Medical Association. The ten rules for health were worked by Lydia Clark, director of physical education for women at Ohio State University. The rules are suitable for all adults.

RUN DOWN BY TRAIN

Dr. B. E. Hunt, of Holden, Logan county, was struck by a passenger train on the morning of November 16. He was taken to the Holden Hospital where he remained unconscious for some hours. Our latest information is that he is slowly improving. We wish for him a speedy recovery.

Dr. Howard Fox Appointed

The appointment of Dr. Howard Fox as professor of dermatology and syphilology in the New York University and Bellevue Hospital Medical College has been announced. He succeeds the late Dr. William B. Trimble who was a member of the medical college faculty since 1898. Dr. Fox is president of the American Dermatological Association. He has been chairman of the sections of dermatology of the New York Academy of Medicine and the American Medical Association.

The West Virginia Medical Journal

Directed and Edited by the Committee on Publication

[The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible]

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS:

WALTER E. VEST, Huntington — HARRY M. HALL, Wheeling — J. HOWARD ANDERSON, Marytown — C. W. WADDELL, Fairmont

MR. S. O. NEALE, *Secretary-Business Manager*, Charleston

Entered as Second Class Matter, January 1, 1926, at the Postoffice at Charleston, West Virginia

Volume XXI FEBRUARY : 1926 *Number 2*

THE DIETARY TREATMENT OF NON-DIABETIC ACIDOSIS *

By ALBERT H. HOGE, M. D., F. A. C. P.
Bluefield, W. Va.

THE TERM ACIDOSIS, as used in clinical medicine, is generally ascribed to Naunyn in 1906. It is really a misnomer because it conveys an idea of an acid condition of the blood and tissues quite impossible in the living organism, but it is another of those misnomers so common in medicine, as elsewhere, that have become so firmly fixed that the original or literal meaning has now become transposed into something quite different.

It is defined by L. J. Henderson as a disturbance of the acid base balance of the body in the direction of a diminished ratio of base to acid. It will be best to elaborate to make this clear. Metabolism, muscular work and other conditions cause the production and elimination into the tissues of the body many acids. The body organism, however, anticipates this by keeping stored up a constant supply of alkalies, called bases, to neutralize the acids formed. There is a normal ratio in the blood between carbonic acid and sodium bicarbonate, of one to twenty. Any disturbance in this ratio may cause an acidosis, or an alkalosis. In normal health there are many acids constantly entering the blood stream, and as just stated, there is stored up a constant supply of buffers, which are nothing but various forms of alkalies, such as carbonates, phosphates, sodium bicarbonate and proteins. Their chief function is to combine with these acids and neutralize them or else convert them into weaker acids.

It is my desire to show you that I believe,

* Read before the West Virginia State Medical Association, fifty-eighth annual meeting, Bluefield, W. Va., June 11, 1925.

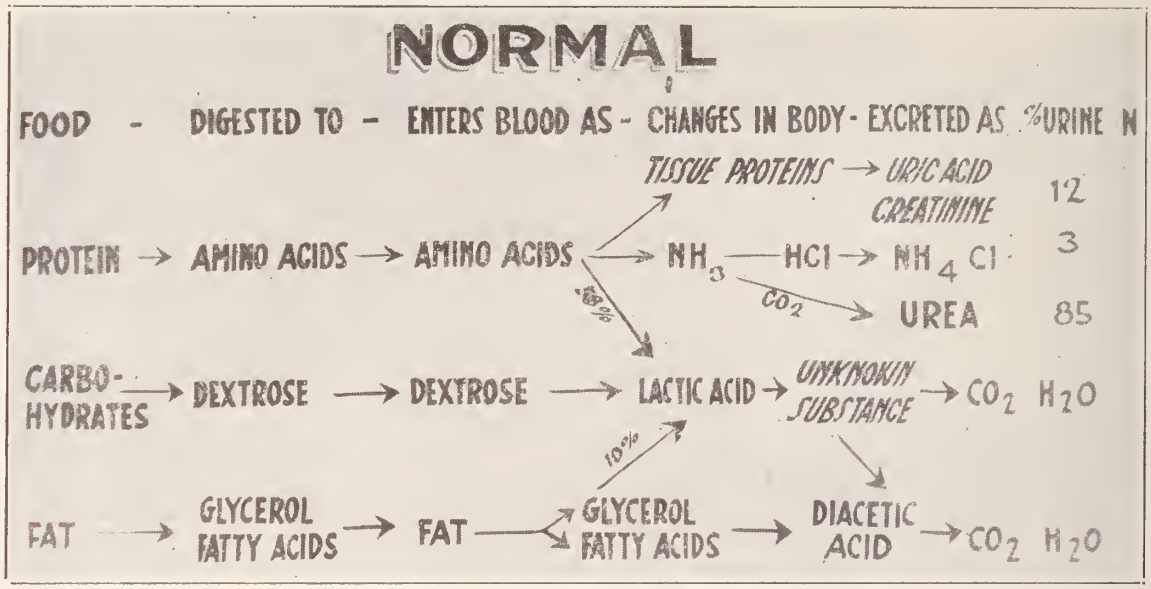


CHART NO. 1

in many diseases it is possible to lessen the degree of acidosis by the proper control of the diet. A well person of average size at very mild work or leading a sedentary life demands about 2,000 to 2,500 calories of food daily. In diseases which cause a high temperature this demand is often materially increased. At the same time the amount of food and the desire for it are lessened. These patients are usually put upon a liquid diet often of low caloric value of usually less than 1,000 calories per day. The carbohydrates that are stored up in the body in the form of glycogen are rapidly utilized, the result being the patient is forced to live largely upon their own fats. Now, a study of these charts [1] will show to what this leads. (See Chart No. 1.)

Normal Protein Digestion.

Some of this, you can see, goes to tissue repair, while some combines with the hydrochloric acid which enters the blood and forms ammonia chloride, a part of it combines with CO^2 to form urea, while 58 per cent of it is converted into lactic acid.

Normal Carbohydrate Digestion

The sugar or starch is converted into dextrose, then to lactic acid and this is converted into an unknown substance. The physiologists and chemists have not as yet been able to definitely determine the end results of carbohydrate digestion. It will be seen also that a portion of the unknown substance of carbohydrate digestion combines with the end result of fat metabolism.

Normal Fat Digestion

The fats are changed to fatty acids and glycerols in the small intestines. As they pass through the intestinal walls they are changed back into fats again, then immediately back to fatty acids and glycerols. The cause of this peculiar and apparently unnecessary phenomenon is unknown. Ten per cent of this fatty acid and glycerols is converted into lactic acid and the remainder or 90 per cent of the total fat, is converted into diacetic acid which would remain unchanged in the blood and be excreted by the kidneys as diacetic acid, acetone and beta hydroxbutyric acid but for the fact that the unknown substance just described as being the end result of carbohydrate digestion gives off a substance which is also unknown that combines with the diacetic acid formed from fat digestion and causes it to be eliminated as carbondioxide and water.

It will be seen then from a study of this chart that about 90 per cent of all the fat taken into the body, unless acted upon by the

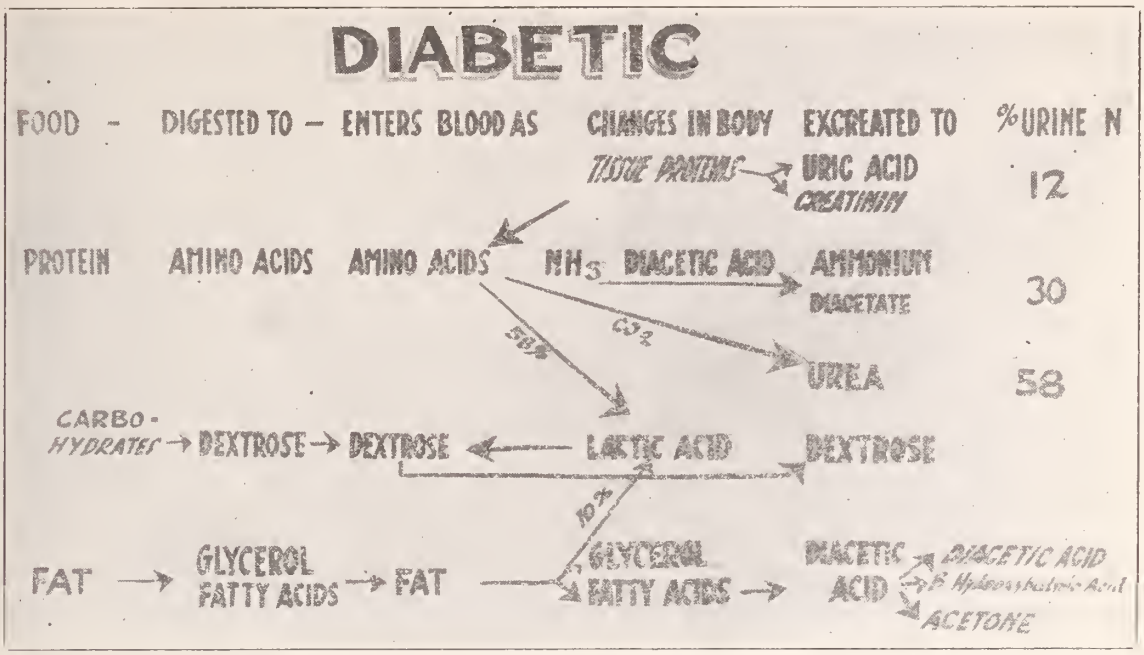


CHART NO. 2

unknown substance in the carbohydrate food would remain as some form of acid in the blood and would produce a ketosis. This food is therefore spoken of as a ketogenic food, while all carbohydrate food and 58 per cent of the protein food and about 10 per cent of the fats are converted into lactic acid and produce the unknown substance which destroy these acid bodies. They are therefore spoken of as the anti-ketogenic foods. (See Chart No. 2.)

The second chart illustrates what takes place in a patient who is a complete diabetic. The principle changes to be noted in this is first under proteins. There is no protein that goes to tissue repair but on the contrary the bodily tissues are broken down and converted back into amino acids. Instead of the ammonia combining with the hydrochloric acid as shown in the normal, it combines with the diacetic acid in the blood and is eliminated as ammonia diacetate. The urea is reduced from 85 in the normal to 58 in the complete diabetic. There is no lactic acid formed from carbohydrates in a complete diabetic, therefore all of the carbohydrate food taken is converted into dextrose and is eliminated in the urine as dextrose. In studying the end result of fat in this condition, there is no unknown substance formed from the carbohydrates to combine with the diacetic acid, this latter must then be eliminated as acetone or diacetic acid.

It will be seen, therefore, in the diabetic, to avoid acidosis, one must maintain a ratio between the ketogenic and anti-ketogenic foods because fats will not burn in a carbohydrate fire.[2] Palmer and Ladd have shown that one gram of carbohydrate will safely burn three grams of fat. The ratio of anti-ketogenic to ketogenic foods of one to three is well known in treating diabetics. A ratio of one to four will cause the appearance of acetone bodies in the blood and since they are acids they must be neutralized. If the amount of carbohydrate intake is not sufficient to create enough of the unknown substance to change it to carbon dioxide and water, the body is forced to call upon the alkali reserve or buffers to destroy these acids, with the result that the bicarbonate reserve and the carbon dioxide in the blood are reduced in proportion to the degree of acidosis.

Every physician is now familiar with the effect of insulin in diabetic acidosis and coma.

Talheimer's [3] first article on the use of insulin in post-operative acidosis opened

quite a new field in the use of this most valuable remedy. That a certain proportion of operative cases will develop an acidosis is well known to surgeons. Several things contribute to this, an important one being the anaesthetic, especially when ether and chloroform are used. The longer the anaesthetic the greater the danger of anaesthetic toxemia. The use of ethylene as an anaesthetic seems to have greatly lessened the danger of acidosis. The presence of any infection increases the danger. The shock and loss of blood oftentimes predispose to it. The custom of light feeding or partial starvation for a few days before operation to lessen gas pains should not be employed, especially so when one considers that the entire intestinal tract is, as a rule, cleared of all food material before operation, and none of these patients are, as a rule, allowed food for a few days following operation. The intake of fluid is always limited. It seems the shock which accompanies so many surgical operations causes a rapid using up of all carbohydrates stored in the body in the form of glycogen and the patient is forced to live for several days almost entirely upon their body fats, which is about 90 per cent ketogenic food. The ratio of one to three is not maintained, therefore, they develop a ketosis, with that, the patient always has vomiting. This really produces a vicious circle, the vomiting causing starvation and preventing the further intake or retention of fluids, thereby increasing the ketosis. It is, therefore, not difficult to understand why emergency cases with little or no preparation before operation do as a rule vomit far less than those cases that are carefully prepared. I wish to fully emphasize that one may have a severe acidosis with little if any ketosis. There are many things that affect the alkali reserve of the body that are as yet without satisfactory explanation.

I wish to tell you today of some of the results we have gotten in our hospital in post operative acidosis and the toxemia or vomiting of pregnancy. I will not bore you with long case reports. During the past twenty-three months we have had nine cases of severe acidosis following operations. Ether was used in each case. They all showed a large amount of acetone and diacetic acid in the urine and each one had a severe and continuous vomiting, flushed face, the lips and tongue were dry and parched, they were all restless, the pulse was rapid and weak; in fact, I have included in this report only those cases of very severe acidosis, the kind that usually vomit until they die. In eight of these we were able to control the vomiting entirely in from twelve to thirty-six hours by the use of glucose and insulin. But in the ninth case, a neurotic man, following a gastro-enterostomy, vomited almost continuously from the time of operation. During the second day he was given 1000 C C of 5 per cent glucose intravenously to which was added thirty units of insulin. There was a distinct improvement and the following day he was given 1500 C C and 45 units of insulin. The fourth day he retained the small amount of fluids taken by mouth, the vomiting returned at intervals, though he was given glucose and insulin daily. The patient died on the ninth day rather suddenly after vomiting a large amount of blood. His acidosis, however, had almost entirely cleared up. I feel the rapid recovery of these eight cases and the partial benefit obtained in the ninth case justify me in reporting them. Our entire staff feel that the recovery of some of these cases was due entirely to the use of glucose and insulin. We are using solutions of glucose with or without insulin more and more to replace the former so called stock solutions following severe operations to prevent acidosis. The hearty cooperation of our surgical staff is responsible for the results obtained in these cases. Surgeons do not always spend much time on the study of the action of drugs. When medication is necessary the surgeon should either study more carefully the art of the physician or else allow the physician to decide what the patient should receive.

We have treated in the past year three cases of severe toxemia of pregnancy. Two were four months pregnant and one six months. The latter had lost thirty-eight pounds in weight. These cases were referred to the hospital by their family physicians to have pregnancy interrupted so alarming were their symptoms. All had acetone in

their urine, and each one had vomited from early in the second month and had been thoroughly treated by capable physicians without any real benefit. Each case was treated exactly alike, put to bed, and were daily given enemas of sodium bicarbonate, 4 oz. of 20 per cent solution, glucose by rectum every three hours and 5 per cent glucose and insulin intravenously. In each case the vomiting was controlled in less than forty-eight hours. After which they were put upon an almost absolute carbohydrate diet, especially fruits, the glucose and insulin being continued for one week. After discharge from the hospital these patients were kept largely upon a diet rich in starch and sweets and urged to use fruits of all kinds. Upon this diet and without further medication they all went the full term without further serious return of vomiting. I wish to emphasize the value of fruits in these cases and correct the impression a few have that acid fruits should not be given in acidosis. The more acid, the larger amount of sugar it will be necessary to use to make it palatable. One gets therefore the normal fruit sugar plus the added cane sugar. It should also be borne in mind that the acids of citrus fruits are oxidized in the body and changed to bicarbonate. An acid fruit will, therefore, become an alkali in the blood and help to destroy the acids already present.

The investigations of Potter and Harding [4] have shown that the toxemia and vomiting of pregnancy is generally due to an acidosis or ketosis; they have treated many cases of severe vomiting in pregnancy successfully by using glucose. Since this condition is due largely to insufficient combustion of carbohydrates one would naturally ask why use the insulin with the glucose. I believe I have shown you on the charts that ketosis occurs only when carbohydrate metabolism is subnormal. I believe it is fair to presume that ketosis occurs when either insufficient carbohydrates are supplied to the body or else the carbohydrate metabolism is below normal. We can easily supply the carbohydrate intake by giving glucose. A number of investigators have shown that some of these people cannot utilize the glucose alone after it is given that it will pass out through the urine as glucose unchanged. Now, unless carbohydrates are combusted and converted into the unknown substance described, it matters not how much is taken into the body, the acidosis due to ketosis will remain unchanged. Since insulin when injected causes both a rapid and complete combustion of carbohydrates in the body it seems rational that insulin combined with glucose should clear up an acidosis due to ketosis more rapidly than when glucose is used alone. My clinical experience has shown this to be the case. I would, however, be reluctant to form opinions from my limited number of cases were it not for the great works of Talheimer,[3] Fisher,[5 7] Mensing,[6] Snell [5 7] and others who have reported cases of post-operative acidosis treated with glucose alone without benefit, that promptly got well when insulin was added to the glucose. In our work the insulin has always been added directly to the glucose and all given together. There are those who advocate the use of insulin separate, half the dose being given before the glucose injection is started and the remainder given at the completion of the injection of glucose. I believe this to be of minor importance.

There are those who will of course be wondering how much insulin to use. Since this product is not standardized and is subject to many changes one can only follow a safe course. One unit of insulin will burn about one and one-half grams of carbohydrate. It would be safe then to use one unit of insulin to three grams of glucose. The 5 per cent glucose solution being the one used in most hospitals, we can figure our doses from that. One thousand C. C. of this solution contains about 50 grams of glucose. You can safely add one C. C. of the U 20 strength or 20 units of insulin and have no fear whatever of shock, the ratio being about two and a half grams to one unit. I wish to again emphasize that one cannot expect satisfactory results from this form of treatment in any type of acidosis except that due to some disturbance of the carbohydrate fat metabolism with the production of ketosis. It is evident that the treatment of acidosis depends upon the manner of its production.

The acidosis of renal origin is due to the failure of the kidneys to eliminate acid phos-

phate. In these cases there is no interference with the acid production in the body but the kidneys are simply unable to do what they should. It is evident that insulin and carbohydrates cannot influence this condition.

In acidosis occurring in diarrhea of infants and young children one sees the type of acidosis occurring in the so-called ileocolitis or alimentary intoxication. This form of acidosis is not the result of an excess production of acetone bodies, although these are at times increased. At other times in the presence of severe acidosis there will be no evidence of ketosis. The acidosis is due in part to the failure of the kidneys to eliminate the acid phosphate, the mechanism being similar to that in renal diseases. The difference being the failure of the kidneys to eliminate the acids in these cases is the result of a functional incapacity of the kidneys due to the fact that so much fluid has been lost from the body by other channels that the urine secretion becomes almost impossible. Oftentimes the urine is reduced to one or two ounces daily. The treatment of this condition calls for the administration of fluids by mouth, intravenously, intraperitoneally or by whatever form they can be introduced. I believe that glucose and insulin should be used in these cases but it would be useless were a large amount of fluid not also used.

SUMMARY.

In a series of nine cases of post operative non-diabetic acidosis the use of insulin combined with glucose has given better and more rapid results than by any other method known to us.

A series of three cases of severe toxemia or vomiting of pregnancy, all having failed to respond to any of the usual methods of treatment, were carried to full term without further discomfort.

* * *

HISTORICAL RESUME OF ACID INTOXICATION THERAPY.

Comparatively recent. 50 years.
Redounds to credit of modern medicine.

1873. Salkowski. (Virchow's Arch.)
Withdrew alkali from bodies of rabbits by administration of Taurin. Consequent death.

1877. Walter. Increase in N H^3 excretion in various diseases found an increase in diabetes.

1883. Stadelmann. Substantiated this work by comparison of mineral acids and bases. Showed that the bases were greatly in excess of mineral acids.
Concluded that acidity of urine due to organic and not inorganic acids.

1884. Minkowski. Showed that the acid was B hydroxybutyric and that diacetic and acetone could be derived from it.

1889. Magnus-Levy NaH CO^3 therapy in man overcomes diabetic coma. Walter had discovered that he could temper the acidosis of his rabbits with Na H CO^3.

1. West. Medical Dept. Presbyterian Hospital, New York City.
2. Palmer & Ladd. Medical Dept. Presbyterian Hospital, New York City.
3. Thalheimer, Wm. Insulin Treatment of Post Operative Non-Diabetic Acidosis. Jr. A. M. A. 81: 83. Aug. 4, 1923.
4. Harding, V. J. and Potter, C. T. The Excretion of Acetone and Nitrogen in Nausea and Vomiting of Pregnancy. Brit. J. Exper. Path. 4:105—June, 1923.
5. Fisher, David, and Snell, M. W. Insulin Treatment in Post Operative Non-Diabetic Acidosis. Wisconsin M. J. 22:220, October, 1923.
6. Fisher and Mensing. Insulin-Glucose Treatment of Surgical Shock and Non-Diabetic Acidosis. Surg. Gynec. and Obst. No. 4. April, 1925.
7. Fisher, David and Snell, M. W. The Insulin Treatment of Pre-Operative and Post Operative Non-Diabetic Acidosis. Jr. A. M. A. 82:699. March, 1924.

* * *

DISCUSSION.

DR. J. D. WILLIS, Roanoke, Va.:

I have been very much interested in this paper by Dr. Hoge on "The Dietary Treatment of Non-Diabetic Acidosis." He has very clearly stated the meaning of acidosis. The study of food values and their application to the individual, both in health and disease, is of paramount importance.

The normal ratio in the blood of one to twenty between carbonic acid and sodium bicarbonate must be maintained to preserve normal health. By adapting food values to this ratio it is quite possible to lessen the demand on stored-up food substances of the body, and thereby prevent unusual body waste in disease.

It is interesting to recount, as Dr. Hoge states, the change in feeding management of surgical cases. He speaks of the damaging effects of long-continued anesthetics, especially ether and chloroform and also the disadvantage of light feeding or partial starva-

tion for a few days before operation. All of this goes to disturb the ketogenic-anti-ketogenic ratio of one to three. Much of the vomiting following operation results from the ketosis which has developed.

His method of treatment of acidosis following surgical operations has certainly produced most excellent results. In the analysis of his series of cases I feel sure that he has restored to health several patients who otherwise would have died. The promptness with which the vomiting was controlled bespeaks a physiological correction. So far as my knowledge goes, his plan of adding insulin directly with the glucose solution prior to intravenous injection is original. I have often used the glucose intravenously, but have given the insulin subcutaneously. His method offers the advantage of sticking your patient only once. His plan of treating severe toxemia of pregnancy is most enlightening and shows us very clearly that much of the suffering due to this state is avoidable.

I wish to commend most highly this very worthy paper.

DR. A. T. McCORMACK, State Health Commissioner, Louisville, Ky.:

It is worth having come from Kentucky to hear this one paper alone, if there had been no other papers on the program. I can not discuss it from a purely scientific standpoint, because I do not know enough about the subject, but from the standpoint of an administrator who stands on the side I can certainly praise it, because it represents careful scientific work. I think it is interesting to see this same line of thought being carried into constant action following our examination of patients, apparently well, who are going to be put on the right diet, who will have their reactions properly analyzed and be given the particular things they need to eat, being given the slight modifications which they need to keep them in health. I look forward to the time when we shall be giving these things sufficiently long before to prevent the vomiting of pregnancy, to prevent the postoperative vomiting. It is very gratifying indeed to me to listen to this paper. It seems to me to be a milestone on the road of progress toward scientific medicine, along which we are all traveling.

DR. CURRAN POPE, Louisville, Ky.:

This is a most interesting subject, and one in which all of us in internal medicine are interested. It is not only interesting in the line of work on which the doctor has spoken, but in other cases, so that we may have not only an opportunity for correcting conditions as they actually exist in the chemical activities and metabolic processes of the body, but it gives us an opportunity to realize how often you and I and everybody else are in reality violating all of the tenets which we teach when we go to the table and eat unbalanced diets and indulge in food that is totally unsuited to a great many of us. I should like to know how many doctors have themselves examined and really know what is fitted for their own metabolism. Very few, I should say. We all neglect ourselves. We get lazy and neglectful, and then we probably turn around and learn something and begin to take care of ourselves and do what is right. Last night I spoke of the individual who is overfat, but I did not have time, of course, to stop and talk on the question of a dietetic regimen suitable to that particular individual. I personally have gone through that experience of being overfat and reducing myself. By carefully balanced diet and by simple restriction in quantities and reorganization of activities one can get rid of surplus fat, but one must in doing that have a sufficient knowledge of the metabolic changes going on in the economy of the individual, or otherwise there may be produced more harm than good, and it is just such work as this, which is really scientific, which enables us to know, in the slang of the day, just where we stand. As to the overly fat, and reducing, I will, in passing, say I believe there is nothing that will so far develop the stamina, the will power, the character, of the individual as the capacity of the individual to go to the table and deny himself that which he wants. Man should not live by food alone, but should live by his cerebrum alone. That is what is coming to be a basic idea in medicine. If we turn back the pages of history and read of the good old Falstaffian days, when men and women vied with one another, when our good old brother, Dr. Johnson, sat down at the

table and ate seventeen or eighteen courses at a meal, they ate well but not wisely; they did not eat scientifically. Today I believe there is a trend in the people and in medicine to each a little more epicurean way of eating a selective diet, a diet more nearly approaching the needs of the organism. I think after a while one loses the extreme desire for food, and in that way becomes better able to govern the intake and place it upon a true caloric and vitaminic basis. The American people are an overfed and an overpampered and an underexercised bunch, and the time is coming when you and I, if we live to that day, shall see, as Dr. McCormack has said, the real medical man, unculted, take control of the individual and teach him, teach him how to live and how to act. When that day comes you and I shall stand on a much higher plane; we shall be more respected; we shall be sought not by the sick but by the man and the woman who realize that he or she is worth more to the community well, than sick. And permit me to say once again that it is just such papers as this that make one proud that he belongs to that body which is denominated the regular profession of medicine. Those of us who want to practice really scientific medicine must follow in the footsteps of the remark made by that gifted and eloquent senator from my native state, Governor Bradley, "We must be the most regular of regulars."

DR. WALTER E. VEST, Huntington:

The subject has been pretty well discussed already, it seems to me, but I do certainly want to congratulate Dr. Hoge on his work and on his paper. I had the pleasure of reading this paper before I came, and I feel it is a real contribution to scientific medicine.

DR. ROBERT C. HOOD, Clarksburg:

From the standpoint of pediatrics Dr. Hoge's paper becomes peculiarly applicable. There is a certain group of cases in pediatrics, ileocolitis, where you have the child developing acidosis. On the other hand we have cases of dehydration where the child does not develop acidosis. These children show no acetone, but quickly develop shock. In the past it has been our custom to give injections of carbohydrate fluid, with the idea of restoring the fluid to the body. Now I think we might add the insulin to the solution, to make the glucose instantly available. We have sometimes overloaded these children with the glucose, but with the addition of the insulin we shall get better results.

DR. CHESNEY N. RAMAGE, Fairmont:

A lot of medical men are being criticised, both in and out of the profession, as being too scientific, and the question is being asked, what has become of the general practitioner, who never heard of amino-acids, never heard of diacetic acid or of acetone? Dr. Hoge, I think, has been the happy medium. He has brought the laboratory to the bedside with, I think, happy results. That is what we want to do in medicine—raise our bedside medicine to the laboratory level.

DR. D. A. MACGREGOR, Wheeling:

Dr. Hood has spoken of the value of this work in the field of pediatrics, and Dr. Hoge himself spoke of its value in obstetrics. It is unfortunate that this paper, which has such a universal application, should be delivered in the section of medicine. I feel that it would be of great value if this paper could be brought to the notice of the surgeons, who are dealing with the non-diabetic acidosis. They are meeting the larger number of these cases, and they are the ones who do not understand the situation. I do not think the doctor emphasized the value of this measure nearly enough. It is absolutely a life saver in severe cases of acidosis.

There is one little technical point to which I should like to draw attention. My associate has handled a large number of these cases for both the surgical division and the pediatric division. The problem which he set himself to work out was how shall we give glucose and insulin slowly enough so that it may be absorbed gradually and so that we run no risk at all of producing shock in the individual by the administration of a large dose at one time? We felt that giving 1,000 to 1,500 c.c of 5 per cent solution of glucose at one time and then waiting 24 hours to give the next instalment was really not the best way of handling it. He devised a method of

giving about 400 or 500 c.c. at a sitting, and has made a device for administering it very slowly. He prepared his solution of glucose in an open beaker and adds insulin to it in the same proportion that Dr. Hoge mentioned. Then a simple bent glass tube reaches to the bottom of that; over the tube is rubber tubing to a wide outlet. (Illustrates by drawing.) This arm has a needle on it, which goes into the patient's arm and is strapped on. This tube leads to his ten c.c. syringe. He puts his watch out on the table (he is very slow and methodical in all his procedures), looks at his watch, fills up the syringe, when the stopcock is adjusted there so the liquid flows into the syringe; then the cock is turned in the opposite direction and he pushes the syringe in. He gives ten c.c. every minute for perhaps fifty minutes—I think it is 500 c.c. he gives at one sitting. Then he repeats it after several hours.

DR. POPE:

Might I offer one practical suggestion in regard to the administration of any medicament in an aqueous solution? It is my practice never to put any aqueous solution in the veins that has not been distilled. We doubly and triply distill that water to be sure we get no foreign substance. One can not be too careful in getting H^2O and getting nothing but H^2O. I am one of those who believe that light anaphylactic reactions may be due not to proteins but to foreign substances in the water.

DR. HOGE, closing the discussion:

There is one thing in treating vomiting of pregnancy—it has been my custom to put my patients on a relatively absolute carbohydrate diet from the very beginning. In the summer ask them to sit down and eat half a watermelon, to live on fruits and sweets. I tell them not to eat milk, eggs, or meat. I do not mean all the time, but for a month or six weeks, leave off milk, eggs, and meat, live on a carbohydrate diet, with large amounts of fruits. It will help them.

DR. POPE: Does that prevent the morning sickness?

DR. HOGE: You are unable to control nausea in the morning, but you do away with the vomiting. That morning sickness, I think, is almost physiological. But you do away with the vomiting, except perhaps once a day.

DR. POPE: Why the nausea in the morning? Is it due to the stretching of the sympathetic nerves and the celiac plexus?

DR. HOGE: You are the neurologist, not I.

TREATMENT OF MERCURY POISONING

Drs. A. Landau, I. Marjanko and M. Fergin of the Wolski Hospital, Warsaw, Poland, from "Presse Medicale" No. 98, Dec. 9, 1925. B/1619.

Citing for descriptions of the method: Dr. Lewenstein in *"Gazeta Lekarka"* No. 3, 1924 also in same journal, No. 22, details of 12 cases treated by this method with 80 per cent of recoveries; the idea of this treatment was given by Milian in his suggestion for the treatment of syphilis with calomel to add to this for each part of calomel 75 parts of subnitrate of bismuth (see Bull. et Mem. de la Soc. med des Hopitaux, No. 32 of 1921) in order that in giving this mixture of 1 centigramme doses of calomel per oz there be prevented any development of mucosal complication during this mercurial medication. Use and observation of this mixture in syphilitic treatment during two years permitted the idea of its value in mercurial poisoning; and this was tried at the first occasion, and has been the standard of treating such cases for now more than two years, as follows:

As soon as the case reaches the hospital, doses in capsules of each: 75 centigrams, of sub-nitrate of bismuth and like quantity of carbonate of bismuth. This dose is repeated four to six times daily. The usual adjuvants of wrapping in wet sheets, intravenous injections of glucose and rectal glucose drip in connection with cardiac stimulation are carefully maintained. At first only sweetened tea or orange juice are permitted for diet which slowly increases with a regime of very limited albumen content.

The published case reports indicate that the bismuth has here a specific action which the statistical results well bear out.—W.S.M.

THE REAL SIGNIFICANCE OF THE TERM BILIOUSNESS *

By DOUGLAS VANDERHOOF, M. D.
Professor of Medicine, Medical College of Virginia.
Richmond, Va.

SOME YEARS AGO a gentleman entered my consulting room with the remark, "Doctor, I am the most bilious man in the state of Virginia." He described a train of symptoms consisting of headache, foul breath, coated tongue, constipation and chronic fatigue, and concluded his story with the statement that he had taken calomel for four or five years but it afforded him only temporary relief. A very complete examination disclosed the fact that this patient was a healthy individual except for a chronic pus infection in the nasal sinuses, and he was referred to a nose and throat specialist who operated and drained the infected sinuses. A most happy result was obtained and all the symptoms of "biliousness" promptly disappeared and have not recurred.

Other Illustrative Cases.

On another occasion, a gentleman sought relief from an "attack of biliousness" which had continued for ten days. The chief symptom was dizziness, and his malady immediately vanished when a mass of impacted wax was removed from one of his ears where it had been pressing against the ear drum. About this same time a young school teacher was sent by her family physician to be examined and treated for an aggravated case of "torpid liver and biliousness," accompanied by almost daily headaches, frequent nausea and vomiting and constipation. In this instance, proper eyeglasses for an unsuspected eyestrain quickly relieved the headaches and gastric disturbance, and the constipation responded to simple instructions in regard to the diet, water drinking and regularity in the time for defecation.

Just the other day, a business man consulted me for a "bilious condition" of five months duration, characterized by nausea and vomiting every morning when he first awakened, general malaise, bad taste in the mouth and loss of appetite. He said he felt feverish in the afternoons, was apt to have headaches and had a rather frequent cough, attributed to cigarette smoking. Complete examination disclosed no cause for his symptoms except a moderately advanced pulmonary tuberculosis.

Humors, Bile and Melancholy.

Strange as it may seem, practically no mention is made of the word "biliousness" in any of the modern text books on medicine, and search through the very complete index of the *Journal of the American Medical Association* for the past ten years discloses not one single reference to the term. In all probability the same proportion of sick individuals feel "bilious" in these modern times as compared with the days of our forefathers, and altogether too large a percentage of these same people dose themselves, or are dosed by well meaning but thoughtless doctors, for supposed liver insufficiency.

Medicine, as an art, still contains many relics of superstition and magic, and is in part hide-bound by ancient beliefs and theories. Among the Greeks, in the days of Hippocrates, disease was a matter of humoral pathology, and among these humors the bile was thought to play a most important

* Read before the 58th annual meeting of the West Virginia State Medical Association, at Bluefield, W. Va., June 11, 1925. This paper appeared, in part, in Hygeia (A. M. A., Chicago), 3:695, December, 1925.

part. Witness our word *melancholy*, which literally means "black bile," and our more or less common expressions, "torpid liver," "biliousness," etc. We no longer ascribe lunacy to the effect of the moon (Luna) and do not attempt to treat it with *lunar caustic*, as was once done, but we still complacently prescribe "liver medicine" for "biliousness" as a specific remedy for a hypothetical hepatic malady.

What Is Biliousness?

What, then, is biliousness? Is it a disease and is it associated in some way with disturbed liver function?

Biliousness is not a disease, it has no essential connection with the liver or bile ducts, but is a term used by the sick individual to describe a group of symptoms characterized chiefly by headache, dizziness, coated tongue, "indigestion", with or without vomiting of bile, constipation and general malaise.

In the majority of cases, the person who feels "bilious" is suffering from a toxemia, or poisoning, which may be a transient phenomenon or a chronic state. The boy who smokes his first cigar presents a typical picture of very acute biliousness but we call it nicotine poisoning. Chronic focal infections in various parts of the body, such as about the roots of the teeth, in the tonsils and nasal sinuses, in the lungs, gallbladder or kidneys, give rise to toxic absorption that frequently masquerades under the term "biliousness". Local ear affections, with disturbance of the equilibrium sense in the semicircular canals, cause a good deal of dizziness which is often misinterpreted. A seasick individual looks and feels extremely "bilious" but we now know that the motions of the ship have affected the sensitive equilibrium apparatus in the internal ears with most unpleasant consequences. Sufferers from migraine often attribute their periodic sick headaches to biliousness. Chronic infectious diseases, such as tuberculosis and syphilis, give rise to various toxic symptoms and are not infrequently treated for supposed hepatic insufficiency until proper examination reveals the true nature of the malady.

Constipation and Purgatives.

To the surprise of many laymen and perhaps of not a few physicians, it should be explained that all modern research has shown that the liver has really very little to do with the regular movement of the bowels. It is true that the bile has certain important functions, among them the proper emulsification of the fat in the food so that it can be readily absorbed from the intestines. As the result of certain diseases or operative procedures, no bile at all may enter the intestines, but escape to the outside of the body through a fistula, and yet, in such instances, the patient may not be constipated. As a matter of fact, he may have a tendency to diarrhea, due to the excess of unabsorbed fat in the stools.

Furthermore, it should also be explained and emphasized that purgative drugs have no effect on the liver. A purgative, whether it be calomel, senna, cascara, podophyllin, or what-not, acts as an intestinal irritant. Nature abhors an irritant and in getting rid of the irritant the intestines also get rid of whatever else is in them and one or more evacuations result. The extensive experimental researches of Dr. George H. Whipple, in this country, and the X-ray studies and clinical observations of Dr. Arthur F. Hurst, in England, abundantly confirmed by many other investigators, have forever put an end to the old-time theory that purgatives have any reason to be regarded as "liver medicine". As Dr. Hurst says: "Mercurial purgatives were formerly believed to act by increasing the flow of bile, but observations on animals and on men with biliary fistula have shown conclusively that they have no action on the liver. The belief arose from the fact that green stools are sometimes passed when calomel has been given; this is now known to be due to the prevention of the decomposition of the bile by the antiseptic action of the calomel and not to any increase in the flow of bile." (*Constipation and Allied Intestinal Disorders*, Oxford Univ. Press, 2nd Ed., p. 353.)

Constipation, of course, is a very real disorder and is due to a variety of causes. It may, or may not, give rise to many disagree-

able symptoms. The recent work of Dr. Walter C. Alvarez, in this country, would tend to show, however, that the bad, or "bilious", feelings accompanying constipation are due to mechanical results rather than to toxic effects. Somewhere in his writings he gives an amusing account of meeting an acquaintance who looked the picture of distress and said he felt very badly because his bowels had not moved that day. Meeting the same gentleman about half an hour later he was surprised to find him jolly, bright and happy, since in the meantime his bowels had moved well. If the miserable distress had been due to toxic absorption from the constipation it was inconceivable that the effect of such poisoning could disappear so rapidly. Dr. Alvarez then began to experiment by inserting a small rubber balloon into the rectum of healthy individuals and after these balloons had been inflated for varying periods of time the volunteers complained of a variety of disagreeable sensations. By further experiments he demonstrated that the unsuccessful effort of the intestines to expel either the balloon or a mass of fecal matter would give rise to reverse peristalsis with resulting distress, flatulence, nausea, loss of appetite and possibly regurgitation of food, coated tongue, etc.

Laxatives, purgatives and cathartics, of course, have a very proper place in medicine, not as the "liver pills" or "liver medicines" of the patent medicine advertisements, but as intestinal irritants to compel the bowels to evacuate their contents. The very fact that they are irritants explains the inevitable train of symptoms that sooner or later develops in the purgative habitue, symptoms that may be so often relieved by proper treatment directed to the cause of the constipated habit.

Coated Tongue and Foul Breath.

Many other conditions play a role in the careless and haphazard conception of "biliousness". For example, sixty-two per cent of healthy people have coated tongues. If, however, an individual has nasal obstruction that causes mouth breathing, if he smokes, if he has a high-arched palate so that the tongue does not come into contact with the roof of the mouth, if he is of that nervous type that habitually has a sticky saliva, these as well as other local causes, often make the tongue unusually coated and, as Dr. Oliver Wendell Holmes advised over fifty years ago, it is far better to clean the tongue with "a small silver hoe" or some other mechanical device rather than take purgatives for a hypothetical liver disturbance.

A heavy, unpleasant or foul odor of the breath is almost always due to local disorders in the mouth, throat or nose. Pyorrhea about the teeth undoubtedly accounts for most instances of foul breath, but it may arise from decayed teeth, diseased tonsils, so-called "catarrh" of the nose, which is in reality chronic infection in the mucous membranes of the nose and sinuses, and from chronic pharyngitis. Less frequently, characteristic odors may be imparted to the exhaled breath by certain diseases of the lungs, in Bright's disease and in the acidosis that may complicate diabetes. Affections of the liver, stomach and bowels rarely, of themselves, impart any odor to the breath.

In Conclusion.

In most instances, when a person feels "bilious" he is really toxic from some cause, most often as the result of a chronic focus of infection some place in the body. Less often he is suffering from a chronic infectious disease or has some disturbance of the ears or eyes. Chronic constipation, due to a variety of causes but bearing no relation to the liver, gives rise to toxic disturbances much less frequently than is generally supposed but does cause a symptom-complex depending to a large degree on a mechanical basis.

Finally, a great variety of conditions, ranging from nervous headaches to cancer of the stomach, will be complacently treated as "biliousness" by apathetic physicians, and the gullible patients will continue to consult such dollar-in-the-slot machines and withdraw prescriptions for "liver tonics", until it becomes generally understood that the person who complains of "biliousness" has a condition which requires proper examinations and study, and that ninety-nine times out of one hundred the cause of the symptoms will be found in some part of the body other than the liver.

DISCUSSION.

DR. WILLIAM W. RIXEY, Princeton:

I should like to hear some of the medical men present discuss Dr. VanderHoof's paper, which it seems to me is an unusually good one. An important aspect, it seems to me, is the fact that he has come up here to talk to us on subjects with which we have dealt all our lives, biliousness and constipation, very simple terms and very usual terms. It seems to me he has taught us something worth knowing about these conditions. It is not particularly in my line, but I think we are better off for hearing this paper. I think Dr. VanderHoof has demonstrated what a great and able physician he is to talk so well and ably on such a simple subject.

DR. J. N. SIMPSON, Morgantown:

This is a very fine paper, and very physiologic. It is very timely, because biliousness is like charity, it covers a multitude of sins. We have taught the layman to use the term, and it is high time that we should talk frankly to them and tell them, when we do not know that we do not know. A man has more respect for a truthful man than for a liar. We know today, from pharmacology, that the only things that stimulate the production of bile are the bile salts and the salicylates. Bile is not a thing that people have to get rid of, but is a secretion and excretion. It is very valuable to the body. The coloring matter is left behind in the intestines, but the bile salts are absorbed and go back to the liver to stimplate the production of more bile. In cases of biliary fistula, where the bile passes directly out of the body, the patient suffers from the absence of those salts. As Dr VanderHoof said, the fact that the stools are green does not mean that the bile should have been excreted, but that it was excreted before the salts had a chance to be absorbed, but the patient is confirmed in his belief that he needed a dose of calomel.

DR. CURRAN POPE, Louisville, Ky.:

It seems to me this paper carries through it, like a golden thread, one thing that is of very great value to us physicians, and that is our own mental attitude. Today medicine is trying to break away from blanket diagnosis, and that is what the term biliousness was in former years. The interesting part of the illustrations in the doctor's paper, to me, was the fact that the cases needed differentiation, not covering the case with a blanket of ignorance and giving it a name. I think nothing can be more dangerous in the practice of medicine than treating diseases by name, rather than treating diseased conditions as they exist in individuals.

I wish to emphasize the frequency of the coated tongue that comes from mouth breathing. These patients are forever medicating themselves for so-called biliousness, when the trouble, as the doctor says, lies higher up. When the condition presents itself it is not a question, as he said, of treating the self-made diagnosis of the patient, if we can call it a diagnosis, but of investigating the case and finding the real conditions and then treating the disease or disorder which may be present, and in that way securing relief from the condition from which the patient has suffered.

DR. VANDERHOOF, closing the discussion:

Dr. Simpson has explained that the work of Whipple, particularly, and the work of many other pharmacologists has shown that the only real cholagogue is bile itself, salicylates and other drugs having very weak action on the liver. A good deal of work has been done to see if calomel stimulates the flow of bile. It has absolutely no effect on the liver at all. Only bile itself will stimulate the flow of bile.

As to Dr. Pope's remarks, I was very much interested several years ago in going over this symptom-complex of coated tongue. We went over 1,500 patients, dividing these cases into four groups. The first group included those individuals who had no acid in the stomach at all. They showed 35 per cent of clean tongues and 65 per cent of coated tongues. The next group, patients hwit gastric subacidity, showed the same percentage of coated tongue, and those with normal acidity showed about the same. Then the patients with hyperacidity showed 75 per cent of coated tongues. At least 62 per cent of normal, healthy people have coated

tongues. There are several causes. The first is mouth-breathing. We are not supposed to breath through our mouths at all, but to eat and talk with our mouths. The second cause is lack of friction. A person on liquid diet always has a heavily coated tongue; so do people with high arched palates. The third cause is perversion of the salivary secretions. The parotid glands secrete watery saliva, but the sublingual glands secrete sticky saliva. Certain nervous individuals have apparently overaction of these glands, and have habitually coated tongues. Dr. O. W. Williams, in 1866, made a perfectly delightful talk on this subject of coated tongue. He ended it with this quotation I have given, that "For the sum of one dollar one can go to a silversmith and have a small silver hoe made, and scrape his tongue and keep it clean, and that is much more sensible than taking purgatives for the relief of this condition."

OBSERVATIONS UPON SOME COMMON DISORDERS OF THE DIGESTIVE TRACT*

By J. W. PRESTON, M. D.
Roanoke, Va.

TEST TUBE diagnosis of disturbances of the digestive tract has had its day and it is now well recognized that the digestive organs are trysting places in which meet the psyche, the functioning of the vegetative nervous system, and of the endocrines; as well as organic and inorganic chemistry. It is the one system of the body unhappily in which there blends most of both pathological and functional disorders. It is with the latter of these that this paper has chiefly to deal.

At the outset I trust I may be pardoned in drawing attention to the fact that in the study of all functional conditions we are forced to depend much upon the history and subjective symptoms and that instruments of precision are but too often of use mainly in showing a negative finding. Unfortunately this is particularly true in reference to the digestive organs. It is for these reasons that in this paper I presume to deal largely with personal observations with the hope of eliciting a discussion which may be mutually helpful.

The alimentary tract is primarily of all most important, yet most abused by appetite and indiscretion. It can lay claim to but few pathological conditions of its own, and since the doctrine of focal infections has come to be established it is seriously questioned if even peptic ulcer, gall bladder disease, and appendicitis, the surgical triad which intrudes into every abdominal diagnosis, can of themselves lay just claim to origin in the digestive tract. Yet, from a medical standpoint, the first outcry of a damaged kidney, a decompensating heart, a tuberculous lung, a pernicious anemia, an exhausted or diseased nervous system, and last but not least a pregnant uterus is not infrequently from a revolting stomach.

These things are mentioned here to stress the fact that no one has the right to designate any digestive disturbance as belonging to the intestinal tract *per se*, till a careful routine examination of a patient as a whole has been made, all the important organs interrogated, and his mental attitude ascertained.

In truth it would be of greatest interest if one could know the proportion of stomach disorders secondary to pathology elsewhere and therefore in a degree functional. How for instance a chronic gastritis supervenes upon gall bladder disease or a chronic appendix, just as in like fashion it may blend with

* Read at the fifty-eighth annual meeting of the West Virginia State Medical Association, Bluefield, June 12, 1925.

frequent attacks of so-called "biliousness" and atony incident to acute or chronic fatigue of body or mind, or to faulty habits of eating and neglect of proper bowel movements; or how on the other hand it may become a part of a gastric neurosis all of which vex the patient and haunt the practitioner, yet if treated intelligently yield pleasing results.

The importance of diagnosing and caring for frank underlying surgical conditions and focal infections has been the subject of such frequent discussion in recent years, that an intelligent effort may be made to exclude them in each case, is here considered axiomatic. Yet by way of parenthesis, one may crave pardon for the suggestion that there are still too many ruptured appendixes, and perforated gastric ulcers going to the surgeon which had best been spared the initial purge by the family physician. Conversely may it not be that the practitioner has as life long patients yet too many suffering from painful adhesions, short circuited intestines, and absent gall bladders who might have profited by further study upon the part of the surgeon prior to operating.

In returning to the consideration of the more functional disturbances viewed from the standpoint of symptomatology, the one symptom perhaps most commonly observed is that of bloating and vague discomfort in the epigastric region soon after the ingestion of food. The next most common is perhaps belching of gas which may or may not be sour and which may or may not be accompanied by the eructation of food. Along with these symptoms, depending somewhat upon the severity of the disorder may or may not be superimposed nausea, vomiting, epigastric tenderness, headache, nervous disturbances, and mental depression.

To the above symptoms coming on more or less acutely the term "biliousness" is applied in common parlance. Speaking more scientifically the term "atony" may be considered more descriptive.

The symptoms above enumerated, blending into the subacute and more chronic, to the laity represent "dyspepsia" or "chronic indigestion", to us chronic gastritis, admittedly an all enveloping cloak to cover a mongrel array of indefinite symptoms supposedly incident to a catarrhal condition of the gastric mucosa, no less and no more definite than so-called catarrhs in other portions of the body. In the event there be blended with either of the conditions here mentioned an overwrought or subnormal nervous system we have all gradations of "nervous indigestion" from the mildest to that of the individual afflicted with gastric neurosis whose chief occupation in life is to diet and to narrate to those who will listen to his gastric woes.

One wishes to inquire what diagnostic and curative measures are most helpful in every day work touching the class of cases under consideration. The answer has in part been given above in directing attention to the importance of searching out and removing gross medical and surgical pathology elsewhere than in the digestive tract. This having been done it can truthfully be said that never before has it been so fully realized that habits of eating, of sleeping, and of work are such tremenduously important factors. Granted that these things have received due attention what then can be done to wean the stomach itself from its faulty habits and correct its abnormal secretions?

It is my observation that the two most important functions to be determined are those of the degree of stomach acidity and of motility.

The stomach tube has certainly been abused and has in a measure fallen into disuse incident to the more accurate knowledge afforded in many respects by the fluoroscope, which instrument is well nigh indispensable in excluding certain organic conditions. Yet after all, it can not be denied that many of the symptoms which bring a patient to the physician are due to abnormally high or abnormally low stomach acidity. Likewise a normal acidity, at least normal for other individuals, on account of hypersensitive nerves is irritating in certain cases. The tube under these conditions gives information which leads more directly to relief than any agent with which I am acquainted, and at the same time affords a means of determining the presence of mucus and removing it. Fermenting food incident to the cessation of peristalsis, or reverse peristalsis in acute upsets, can certainly be more quickly re-

moved and relief more promptly given by the tube than by the purge.

In the matter of low acid values it may be well to call attention to Stockton's statement that 37 per cent of individuals over fifty years of age do not show free acid. Be this as it may, it must be admitted that one not infrequently encounters a persistent diarrhoea in achylia which will not yield until a liberal amount of hydrochloric acid be administered.

Touching the matter of motility, it is most interesting under the fluoroscope to watch the rapidity with which a barium meal passes in the absence of free hydrochloric acid. Paradoxically it is also of interest to watch a similar effort of the stomach to empty itself rapidly in marked hyperacidity of nervous origin. It is also extremely interesting as well as instructive to note how that there is often cessation of normal motility and a six hour meal retention in cases of fatigue or headache.

To return to the consideration of acid values, it is surprising how similar are the subjective symptoms in some cases of the diverse chemical findings, anacidity and hyperacidity, this more particularly in reference to the burning eructation, the accumulation of gas and discomfort in the epigastrium. Adding to the difficulty of differentiating between low acid and high acid values without the tube, bicarbonate of soda often yields a measure of symptomatic relief in both, due perhaps to the sedative effect of the carbon dioxide liberated.

That achylia is frequently a forerunner of pernicious anemia and like dyscrasias argues much for the routine use of the tube in gastric disorders.

While it may be held that the general practitioner cannot afford the time necessary for a routine gastric analysis, and that his reagents when most needed may not be at hand, it is surprising how quickly such an examination can be disposed of by one who gives it some little attention. Even the use of the ordinary Congo red paper or better still the color scales now being introduced similar to the Talliquist's Haemoglobin scale give a surprising amount of information.

In passing a word as to diets. It is interesting to note the varying diet lists prescribed by different authors for similar conditions. My personal observation is that after all it is far more important in the average functional case, how one eats, and how much he eats than what he eats.

Nervous indigestion or its congenor gastric neurosis demands more than passing notice for the reason that it is gradually dawning upon the profession that this syndrome occurs chiefly in a type of individual to whom the word asthenic has come to be applied. By way of explanation it may be stated, this is the same type from which come also neurotic heart conditions especially effort syndrome, tachycardias and attacks of palpitation. In short these are individuals whose vegetative nervous system is cast upon an unstable balance and who blush easily alike externally and internally. Physically in this type the bony structure is light and slender, chest narrow, muscles of poor texture and easily exhausted, and coincidently the thoracic and abdominal organs ptosed. The resistance to infections and to mental and nervous strain is low.

Abt [1] in a recent article has splendidly depicted this type and states that one child in every five is born with the asthenic make up. This estimate impresses one as rather high, but since many such children, especially those reared under favorable conditions, and who in after life may not be subjected to severe strain, do not develop symptoms, it may be correct.

Harlow Brooks,[2] in considering this type in connection with neurocirculatory disturbances after calling attention to the mental and nervous dyscrasias incident thereto, cautions that one must not get the idea that their nervous reactions are always abnormal and states that from among them come many creations of genius; that musicians, actors, writers, painters, and others of a sensitive and temperamental nature are often of this make-up.

I have stated above that the abdominal organs of the asthenic are abnormally sagged and that the resistance to infections is low. For these reasons it is manifest that this type is more prone to the ordinary functional disturbances. To this background also

there is but too often added out of proportion to the apparent pathology, sour stomach, nausea, rapid bloating, particularly spastic, colicky pains, tenderness over the stomach and colon, almost always constipation, usually scybala and perhaps mucus in the bowel movements, and upon the whole there is apt to be superimposed attacks of urticaria and not infrequently of neuritis. If of long standing, as they usually are, there is likely to be a history of from one to three abdominal operations, beginning as a rule with the appendix. Too often such a patient has in truth, like the woman of old, "suffered many things of many physicians" and in despair has become a patron of the cults. This type deserves a more sympathetic study than has been accorded it in the past.

Reverting to the care of the asthenic type it can be readily understood that in the correction of the numerous ills to which these people are prone, not the least of which are the digestive, neither medicine nor surgery alone, nor your diets nor the endocrines can be a panacea, but that the individual as a whole in the setting of his worries, real and imagined, of his home, and of his business, must be considered and treated. His mind is morbid because in an evil hour some physician has informed him of his enteroptosis but this does not argue that a certain percentage are not benefited by a supporting bandage or corset, likewise that they are known to tire abnormally easily does not argue against a proper treatment of atony, or chronic gastritis, catarrah of the stomach, if one please, which is all the more prone to exist, and further that the use of nux vomica or other strychnine preparations may not have a most beneficial effect in toning up the tired muscles of the intestinal tube, and at the same time tend to relieve the mental depression which is often so distressing. It was precisely in this type of case that Musser found nux vomica given in liberal increasing doses so valuable in combating hyperacidity. Conversely as strange as it may seem, the combination of this drug with the sedative effect of moderate doses of bromide administered at regular intervals is not infrequently most happy. Looking to a return to fairly normal health, following a painstaking examination, a heart to heart talk with the patient of this type is often of more value than all medication.

It is extremely important that such patient be taught that he is not sick but that his symptoms are in a large measure due to the canker of worry, unrest, and uncertainty in his mind. He must be taught how to rest and how to work which are of equal importance. He must learn that his stomach, like the other organs of his body, can not do good work unless it have plentiful nourishment, properly taken. Incidentally it may be mentioned that many of these people have starved themselves until they are pitiable. Their study and treatment is certainly time consuming and many cannot be permanently controlled, continuing to go the rounds from one practitioner to another. However with patience a fair proportion can be made to understand that their malady is not mortal, and that by living within their capacity to work and worry, and thereby sparing their nervous system, they will be far more comfortable and happy. From among them come many extremely grateful patients.

In conclusion I wish to emphasize:

First: That the majority of digestive disturbances do not originate in the stomach itself and therefore the importance of careful history taking and thorough physical examination before beginning the treatment of the digestive organs.

Second: That an examination of the gastric contents often gives a clue to underlying dyscrasias such as pernicious anemia and carcinoma when not previously suspected.

Third: That disturbance of the nervous system is an extremely important factor in the treatment of so-called functional stomach disorders and that combined they act as a vicious circle.

Fourth: That there is a fairly definite entity, perhaps for the most part inborn, but also acquired, to which the term asthenia has been applied, and that those so constituted are of low resistance and prone to go to pieces under strain. Their vegetative nervous system is unstable particularly as related to the digestion and circulation, giving rise to varying symptoms and various diagnoses, and in these best results are obtained by

treating the patient as a whole, and as a part of his environment.

1. Abt, Isaac, A. Asthenic Children, Southern Medical Journal, 18-19 (January, 1925).
2. Brooks, Harlow: Neurocirculatory Asthenia, Annals of Clinical Medicine, July 1924, 11.

* * *

DISCUSSION.

DR. A. H. HOGE, Bluefield:

I should like to express my appreciation to Dr. Preston for bringing to us this very timely and practical paper. I feel that it is as practical and as full of common sense as any paper we have had before this section. Those of us doing hospital work are especially impressed by the number of people referred in for X-ray examination of the intestinal tract in whom no physical examination whatever has been made. People are also referred for examination of the chest in whom no examination has been made. Only this morning a patient came in for an X-ray of the chest who only very reluctantly permitted me to make even a superficial examination. I am glad to see that the pendulum is beginning to swing back, and that we shall have more careful and painstaking histories and examinations.

DR. J. N. SIMPSON, Morgantown:

This paper ought to give us some thought. We ought to realize that these patients whom the doctor describes are those that fall into the hands of the Christian Scientists and are so wonderfully benefited by their work. It emphasizes the fact that every doctor should have a course in psychology before he begins practicing. It is our lack of understanding of our patients that allows these types to get away from us. They are suffering, and mental suffering is just as bad as bodily suffering. We want to be patient with them, study them, and get them to understand that we are endeavoring to help them. We want to encourage them to put their burdens upon us, and persuade them that if they will follow a natural regimen they will be restored. I find this true in the case of students who come to the university and work beyond their powers; it is very hard to persuade them that they have simply been using too much nervous energy and that they must rest; if necessary, drop part of their work. The same is true of many mental workers, professors and others. The whole thing is to study the patient and encourage him.

DR. A. P. BUTT, Elkins:

Those people who come to us with disorders of the stomach by no means all have disorders of the stomach. I think the statistics of the Mayo Clinic show that very few have any real disorder of the stomach. Almost anything will show up in the stomach—grief, joy, overeating, overwork, almost anything. I notice that Dr. Preston said that overeating has very little to do with it. I had hoped, being an overeater myself, that he would give some attention to this.

We must learn that because a man comes in and wants something for his stomach there is hardly any indication whatever that he has any organic disease of that organ.

DR. PRESTON, closing:

The main thought in my mind was first that we must exclude any organic condition; after that we must consider very, very carefully a man's habits of eating, from his cradle on up, how he has been taught to eat and what he eats, how fast he eats, and see that his diet is well balanced and that he does not overload his stomach.

TO USE TUBERCULAR VACCINE

After a year of study and experiment of the B. C. G. bacillus vaccination against tubercular infection (Calmette's method) that was first presented in the United States by the abstractor—by the United States Department of Agriculture and the N. Y. City Health Department, the latter now announce their intention to bring it into extensive and popular use in their work of this year.

This vaccination, it will be remembered, is suitable only for use with new born children, who take by the mouth once a week for the first three weeks of life a small teaspoonful of the B. C. G. culture and have then a proven immunity against tuberculosis for several years; an immunity that can be prolonged by repetition at suitable intervals of such vaccination.—W. S. M.

ACUTE ABDOMEN—WITH SPECIAL REFERENCE TO DIAGNOSIS *

By H. B. LUTTRELL, M. D., *and* P. R. FOX, M. D.
Both of Bramwell, W. Va.

SINCE this is a subject on which a volume could be written, we shall endeavor to treat only three of the most common conditions which have come under our observation, namely: Appendicitis, perforated ulcer and intestinal obstruction.

Perhaps in all the diseases to which the human body is subject there are none in which an early diagnosis is of more importance than these.

By far the most frequent acute abdominal disease is appendicitis, and, therefore, this condition should ever be in the mind of the practitioner. Moreover, appendicitis is not to be considered as an antiquated subject since according to the vital statistics of the registration area of the United States since 1901, its mortality rate has been gradually increasing. Early recognition is a step forward in saving the lives of those afflicted with this malady, hence making a discussion of interest. We are called to see a patient with pain in the abdomen and find upon questioning that usually, though variable, the pain has its origin in the epigrastic region and in some hours radiates to McBurney's point. Following the onset, nausea and vomiting may occur. Constipation, though not always present, is usually the rule. Upon examination we find the temperature ranging from normal to about one hundred and two (102) F. Often times the patient is in the dorsal position with the right thigh flexed on the abdomen, in an effort to relieve tension on the affected side.

The tenderness with rigidity is perhaps the most characteristic feature of acute appendicitis. The other portions of the abdomen may be palpated with comparative comfort until the area over the inflamed organ is reached; then signs of pain are made manifest. If pressure is made with the finger tips along the right anterior costal margin and the patient is made to cough, often times the discomfort experienced is in the region of the appendix. The degree and kind of tenderness apparently is a surer index of the pathology than the leucocyte count. One case who was markedly tender gave a blood count of only about 13,000 leucocytes, whereas, another patient not so tender gave a count of 26,000. Upon operation, the former of these two had the greater pathology. If, however, leucocyte counts are made early and frequently repeated, for instance every two hours, the information gained will be of considerable value in determining the course and severity of the attack. The increase is in the polymorphonuclear element largely. A leucopenia late in an attack when the temperature and pulse remain up, may mean that the condition is particularly grave. One patient, a boy of five, who had been sick about 24 hours when seen, had a leucocyte count of 15,000 and when the abdomen was opened, a ruptured appendix was found. The patient died. Another patient, a young man in the early twenties, with a count of about 6,000 when opened, was found to have a ruptured appendix with an abscess formation. He did not succumb to the attack, but the recovery was comparatively slow. The average leucocyte count is around 15,000.

In making a diagnosis of appendicitis, there are certain acute conditions of the abdomen which should be kept in mind. Those diseases seldom accompanied by a temperature

* Read before the Mercer County Medical Society, Matoaka, W. Va., November 24, 1925.

are Deitl's Crisis which occasionally results from the kinking of a ureter in a movable kidney and stone in the right ureter. The latter condition, however, causes a pain referred to the genatalia, and red blood cells may be found in the urine. X-ray is also of service in the diagnosis of either. Abdominal crises of locomotor ataxia, gall stones and acute obstruction of the bowel are also conditions to be considered. Those conditions associated with a temperature which may confuse us are inflammatory conditions of the right tube and ovary which should be differentiated by a careful pelvic examination from typhoid fever when the pain is chiefly in the region of McBurney's point. However, in the latter disease the slow pulse, the constant leucopenia and the enlarged spleen should put us aright. Acute hemorrhagic pancreatitis may also be considered, although this is a comparatively rare disease and is associated with definite tenderness in the upper abdomen as well.

Occasionally a lesion above the diaphragm, particularly in children, such as lobar pneumonia or diaphragmatic pleurisy will be accompanied by pain in the lower abdomen, hence a careful examination of the chest should be made before making the diagnosis of appendicitis.

With a badly inflamed appendix there is a more or less characteristic gait if the patient is allowed to walk a few steps. There is a drawn over protective attitude and the right foot is placed more carefully than the left to prevent jarring of that side. The readiness with which the patient consents to an operation also throws some light on the severity of the inflammation. In cases of real appendicitis it usually takes but little persuasion to get the patient to the hospital.

In summing up this disease it might be well to say that in most cases it is not necessary to go into all of the fine points of diagnosis to be reasonably certain as to what we are dealing with, and in some cases it is so apparent that even the family may have figured it out before we arrive which is to the patient's advantage if they have had previous experience therewith. Furthermore it would seem a step forward to educate the public more as to the nature of the disease, as so often the patient is given a dose of some cathartic before the doctor is called, thus in many instances jeopardizing his or her life.

We pass to the second condition which we were to discuss, namely: perforated ulcer, and if an early diagnosis is important in appendicitis it is more so in this disease for rarely without surgery does a perforated ulcer terminate other than fatally. The patients who have a history of ulcer are the ones to be considered as liable to have perforation, hence the necessity of trying to get a good history of the digestive disorders. Ulcers seem to be somewhat seasonal as to the amount of pain that they give, being worse in the spring and fall than at other times during the year. They also occur more frequently in men than in women and the degree of skin exposure is thought to have something to do with the disease. Other theories are local circulatory disturbances, infections, and improper diet. The disease is not often found in childhood or even in patients under thirty years of age; however, in the thirties and the succeeding years as high as sixty or older it is at the height of its prominence. Ulcer more frequently occurs in tall slender individuals rather than in the heavier type. The time of day when the patient feels the best is in the morning before breakfast. Later in the day a few hours after eating, however, the disagreeable hunger pain which is a combination of a burning and gnawing sensation comes on. The length of time after eating that the pain manifests itself depends somewhat on whether the ulcer is gastric or duodenal. Older writers described gastric ulcer as giving pain directly after eating, but it seems to be the consensus of more recent opinion that the pain in gastric ulcer also may come on later after eating. The pain in either case can usually be checked by eating certain foods or the taking of soda bicarbonate or some form of alkali. There are on the other hand certain articles of diet which make the pain more pronounced, such as acids, raw fruits, soups, meat extracts, salt, pepper and other condiments, also pure sweets, alcohol and tobacco make the symptoms worse. Eructations of gas or vomiting may be experienced. The patient usually has a good

appetite, but often is anemic and under weight because he restricts his diet so that he gets limited nourishment. The most dangerous complication of ulcer is perforation which occurs in a considerable number of cases. In acute perforation the patient experiences an agonizing epigastric pain so severe that it spreads over much of the upper and central abdomen. The pain is constant and so excruciating that even morphine in repeated maximum doses seems to have but little effect. Extreme tenderness and board like rigidity of the abdominal walls are present. In the early stages the leucocyte count may be but little affected. Vomiting may or may not occur. Palor, cold clammy perspiration, anxious expression and quick pulse are likely to be noted. One of our patients resembled rather closely the above picture with the exception of previous history.

A man in advanced middle life, a railroad employee, of medium build, accustomed to labor and giving a history of periodic attacks of indigestion, but who rather out of the ordinary seemed to relish acids and even during one of the previous attacks had taken dilute hydrochloric acid for an interval to an apparent advantage. This treatment was given him because of no definite ulcer history, and on the assumption that the indigestion was due to an achylia which is often present in advanced years. Some months later early one morning, a call came to see this patient who complained only of nausea, and even at this time we could elicit no definite ulcer history. There were no points of tenderness or rigidity found on abdominal examination and no pain anywhere. Suddenly about five or six o'clock of the same day, he was seized with an intense pain. When seen by us a short while afterwards, he was giving forth agonizing groans. Morphine was administered hypodermically at intervals until nearly a grain had been given with apparently little or no relief. Upon palpation of the abdomen it was found to be exceedingly rigid. The patient was in a perspiration, his temperature about normal, his pulse had risen markedly since morning, and his blood count was only slightly elevated. The patient was taken to the hospital and his abdomen opened. Near the pylorus was a ruptured ulcer about the size of a pencil. The perforation was sutured, the patient made an uneventful recovery and is now back at work. (He is, however, on a diet and the usual post operative treatment for ulcer.) It is reasonable to believe if operation had been delayed, the patient's chances for recovery would have been lessened, and hence the importance of an early diagnosis.

This brings us to our concluding condition, acute intestinal obstruction, which may be defined as any condition which totally occludes the lumen of the intestine, whether it be intrinsic or extrinsic. In the two preceding conditions an early diagnosis is certainly of considerable value. But even in a ruptured appendix or perforated ulcer there may be, however slim, some chance of the offending area becoming walled off and the patient finally recovering. However, in acute obstruction, unless it is relieved, death is certain.

The diagnosis is made from the history together with the signs and symptoms. Usually the onset is rather abrupt. Intense pain, intermittent in character is the chief symptom. The time of vomiting varies apparently with the position of the obstruction. Likewise the time of collapse varies with the position of the obstruction, occurring sooner when it is high. Ordinarily the abdomen is not sensitive to pressure. There is an early distension which increases as the condition advances. Constipation is complete, however, small particles of fecal matter below the occluded area which may adhere to the colon, may be washed out with repeated enemas. The blood count gradually increases and may reach as high as fifty thousand. When diagnosis is delayed and a collapse results, perhaps it can be pictured no better than by Stengel in *Tice's Practice of Medicine* as follows:

"The skin is cold, pale and bathed in sweat. The face wears an expression of anxiety and is pinched. The temples appear sunken. The eyes are depressed in their sockets and are surrounded with dark rings. The respiration is shallow and often sighing. The temperature of the body falls. The pulse becomes rapid, feeble and finally thready and irregular. The mucous membrane becomes

dry, so that the mouth is literally parched. Urinary excretion diminishes until it may become suppressed. Finally the patient sinks into a state of stupor or coma."

Conditions from which obstruction are to be differentiated are perforating appendicitis, Dietl's crisis, bilary and renal colic, perforating ulcer of the stomach and duodenum and acute pancreatitis, of which something has formerly been said. All of these may give sudden intense pain, vomiting and collapse, but the distension is not so marked as in obstruction nor is the pain likely to be so intermittent in character. The vomitus is not so apt to become fecal in these other conditions. Moreover most of these are of a surgical nature, and no time should be wasted on differential tests.

Not long ago a call came to see a patient about 2:30 or three o'clock in the morning —a woman about middle life. The first part of the night she attended church and while there was seized with an abdominal pain, and after coming home the discomfort which was periodic became progressively worse. At the time when first seen she seemed in good spirits between the paroxysms of pain. She was given Camps' Tr. Opium, and on its failure to give relief was given one-fourth grain of morphine and later one-sixth grain more. Her pain in spite of the treatment grew worse. Enemas were given but after the first, the water came back practically clear. There was little or no vomiting up to this time. A mass was present to the right of the umbilicus and her temperature was subnormal.

She was taken to the hospital and seemed to suffer considerably along the way and after arriving while preparation was made for operation. Also after arriving at the hospital her pulse was weak and her extremities cold. Another hypodermic of morphine failed to give relief, and about seven o'clock she was opened up and the cecum found to be twisted causing an obstruction. This was released and the abdomen closed. For the first one or two days she apparently did well and then about the beginning of the third day began to show unfavorable symptoms and that evening was opened up again and the greater part of the small intestine found to be in a pregangrenous state—thought to be due to embolism in the mesenteric artery. The patient died shortly afterwards.

Perhaps the discussion of conditions which have been gone over to such an extent as those taken up in this paper is tiresome to most of you; but even if our efforts have been successful in adding but a small stimulus to early diagnosis and prompt action in these cases where delay means such tragic fatality, we do not consider that our labor has been in vain.

NEW CONCEPTIONS OF THE HEREDITY OF TUBERCULOSIS

At the meeting of November 23, 1925 of the Academy of Sciences at Paris, France, Drs. F. Arloing and A. Dutourt of Lyons demonstrated the experimental realisation of the transmission of tubercular infection from the mother to the foetus through the placenta; in which experiments as infective agent of tuberculosis, a porcelain filtered juice from tubercular lesions of children was used, and produced in the foetus of the thus tubercularised mother, infected lymphatic ganglia showing on examination the characteristic acid-fast bacilli of tuberculosis.

Such experiments may influence very deeply our conception of hereditary tuberculosis and its transplacential possibility by this most subtle form of the bacillus.

NOTE: For 25 years the existence of infectious agent of tuberculosis other than the well known bacillus type has been maintained by many bacteriologists of extreme distinction. The so-called Much granules have for some time been widely admitted to be infectious types of tubercular microbes. The above experiments would tend to establish also an infectious form that was in fact a filtrable virus. All of which is contributory material for those who, like the abstractor, conceive the germ of tuberculosis to be very probably a degenerate protozan type rather than a true bacillus.—W. S. M.

AN X-RAY STUDY OF BONE LESIONS WITH SPECIAL REFERENCE TO BONE TUMORS*

By DR. MAX KAHN
Baltimore, Md.

BONE DISEASES can be divided conveniently for the purpose of study into two main groups, inflammatory and neoplastic. In the inflammatory group are included periostitis, osteomyelitis, syphilis and tuberculosis, while the neoplastic group can be subdivided into the benign and malignant. Early periostitis, namely, the acute stage is practically impossible of visualization roentgenographically before the seventh to the tenth day after its onset, when raising or thickening of the periosteum parallel to the shaft may be seen. Osteomyelitis is not infrequently associated with periostitis and is equally difficult of visualization before about the tenth day. Clouding of the medullary canal may be seen before this time and the lesion suspected, but about the tenth day new bone formation and thickening of the cortex with more or less irregularity takes place revealing the nature of the lesion. In both chronic periostitis and osteomyelitis the degree of new bone formation depends largely on the duration of the disease and here we may find roentgenographically sequestrae and thickening and irregularity of the cortex usually parallel to the shaft with areas of new bone formation and bone destruction. In the Brodie's abscess we find a localized area of absorption and destruction of varying size surrounded by more or less new bone. This may also sometimes be found in patients who have had typhoid fever months or years before.

Many malignant and some benign tumors at one time or another have changes which roentgenographically resemble osteomyelitis and are differentiated from this disease with the greatest difficulty. It is of course understood that in all bone lesions a careful history, Wasserman test, complete blood count, a study for the presence or absence of Bence Jones bodies and a thorough physical examination is to be made. It is also advisable to ray the chest and the opposite bones for comparison.

Syphilis of bone may be either congenital or acquired. In the congenital form one may not infrequently see raising and thickening of the periosteum not unlike chronic periostitis, and when associated with a positive Wasserman reaction leaves little doubt as to the diagnosis. The acquired form when encountered late in the disease is manifested by thickening of the cortex. The long bones, particularly the tibia, are commonly involved with saber-like bowing anteriorly. Even though the Wasserman reaction be negative, when one finds roentgenographically this thickening and saber-like deformity and obtains a history of syphilis, anti-luetic treatment should be instituted. Acute syphilis of bone I have never seen and it probably would be as difficult to recognize as acute periostitis and osteomyelitis. Sub-acute syphilis produces destructive changes with some new bone formation at the same time and when associated with a positive Wasserman reaction should be easily recognized. Tuberculosis frequently involves the epiphysis in contra-distinction to osteomyelitis which usually involves the diaphysis. While exceptions do occur this is an important differential point. Tuberculosis also frequently involves the joint at the same time and commonly bone atrophy or osteoporosis is associated with it.

Perhaps the most common of all benign bone neoplasmata are the exostoses. These

* Read before the Barbour-Randolph-Tucker Medical Society at Elkins, September 30, 1925.

may arise from the shaft as a single process of new bone somewhat cauliflower in appearance with or without a pedicle and are of varying size and shape. They usually grow in an upward and outward direction pushing the soft structures before them. They may be single or multiple and are usually best left alone, unless they cause pain by pressure or interfere with function, when they should be removed.

In the central tumors we are helped somewhat by age, location in shaft or epiphysis and the bone involved. With rare exceptions the bone cyst or osteitis fibrosa, the next most common benign tumor, is observed at ages under eighteen. It usually is observed under fifteen and very frequently from five to twelve years of age. Involvement of an epiphysis with osteitis fibrosa is very rare and is usually seen in adults. The bone cyst may attack any bone, but is most frequent in the long pipe bones. The giant cell tumor, with the rarest exceptions, is observed in the epiphysis after the age of twenty and most frequently between twenty and thirty. Central sarcoma of bone is very rare. In Dr. Bloodgood's experience there are two chief types, one a sarcoma developing in a preexisting chondroma or chondromyxoma and the other the bone aneurysm which is a malignant hemorrhage cyst. When one observes therefore a central tumor in the shaft of an adult he should beware of the myxoma or the chondrosarcoma. There is therefore no positive way of differentiating the various types of central tumors in the epiphysis of a bone in an adult; the probabilities point to the giant cell tumor, but any benign or malignant type of tumor may occur. If the central tumor is in the shaft of an adult, as before stated, it is probably a chondroma, myxoma or sarcoma. The remarkable feature of all central tumors of all types and at all ages when first seen in the roentgenogram is the absence of any bone formation in the periosteum covering the bone shell and the absence of ossification within the bone shell. Ossification of the bone shell giving it a thicker and irregular appearance has practically always been associated with a chondroma. Ossification of the central area with no history of operation, injury or roentgen-ray treatment is seen chiefly in osteitis fibrosa and occasionally in metastatic carcinoma.

Fracture is most common in the bone cyst, next in the metastatic carcinoma and least frequent in giant cell tumor. Pathological fractures are more common in the shaft than in the epiphysis, suggesting that the site of the tumor may have more to do than pathology. Ossification usually follows rapidly fracture of a bone cyst, while fracture of a giant cell tumor practically never ossifies. Ossification is unusual in the malignant tumors whether primary or metastatic.

Of the malignant tumors probably the commonest is the type of sarcoma where the periosteum is without marked ossification and next the sarcoma with marked periosteal ossification. Periosteal sarcoma produces both destruction and ossification of the periosteum, frequently extends into the bone beneath destroying it and also infiltrates the surrounding soft structures. The infiltration is quite characteristic roentgenologically when it extends into the soft structures as fine radiating lines at right angles to the shaft. The ossifying or sclerosing type of periosteal sarcoma is manifested by marked dense irregular new bone formation infiltrating the soft structures and is slow in destructiveness. The osteoporosis type of periosteal sarcoma is rapidly destructive.

Metastasis to bone may be secondary to almost any type of carcinoma, but chiefly of the breast, ovaries, uterus, prostates, tongue, etc. Hypernephroma is not infrequently followed by bone metastasis. Sarcoma of bone may be either primary or metastic, but *carcinoma and hypernephroma of bone* are always metastatic. The lungs and mediastinum are commonly involved in sarcomatous metastasis.

The treatment of bone tumors is by surgery, Coley's serum, radium and roentgen-ray. Surgery has been the method of choice until recently. Coley's serum has been used in sarcoma. Radium and the roentgen-ray are being used more and more in recent years and in some of the malignant tumors with gratifying results. Surgery is still the method of choice in certain types of tumors, particularly when resection or amputation is

definitely indicated. Dr. Bloodgood has referred to me a number of bone tumors of a malignant character for deep roentgen-ray treatment and I would like to call attention particularly to two at this time.

One, that of a boy age 16 years, had practically complete destruction of the left scapula, with extensive infiltration of the surrounding soft structures. Dr. Bloodgood felt that if he were to operate he would have to do a complete shoulder girdle amputation and then would not be certain that he had removed all of the neoplasm. This boy received his first deep X-ray treatment about two and a half years ago, and I admit that the destruction of the scapula was so marked and the infiltration of the surrounding structures so extensive that I had little hope of helping him. After a course of treatment the bone gradually began to reform, and now, at the end of two and a half years, the scapula is practically restored to normal, so far as we are able to tell. It resembles very much the opposite scapula; the infiltration of the soft structures has completely disappeared, and there is no demonstrable evidence of metastasis to the lungs. He is free of symptoms, feeling well and enjoying life the same as any boy of his age. We are not claiming this case as cured, but will follow him carefully.

Another case is that of a boy, aged 18 years, who had an injury to the femur in a football contest. Several weeks later a proliferating growth at the site of the injury was found, strongly suggesting a malignant neoplasm. Deep X-ray treatments produced regression of the growth and now, about two years later, you can see very little evidence of it. The boy is enjoying good health and indulges in all physical exercises and, so far as we can tell, is symptom-free of malignancy. We do not call this boy cured, but at least he is well and enjoying good health.

With greater experience we feel that radiation particularly the deep roentgen-ray will prove even more valuable. We have found that those cases which respond soon after the first or second treatment are the ones that seem to be more easily influenced in reduction in size of the tumor with relief of pain. Treatment s should be continued over a considerable period of time with frequent check-up roentgenograms. The chest should be frequently roentgenographed during the course of the treatment and deep roentgen-ray treatments should be given over the mediastinum and lungs when suspicious metastatic mediastinal or lung shadows appear.

STENOSIS OF NECK OF BLADDER

Charles C. Chetwood (*Urol. and Cutan. Rev.*, August, 1925), concludes from his personal experience and a review of the literature that: (1) Contracture of the neck of the bladder may embrace in classification a variety of conditions that have in common one principal feature, namely, obstruction to the urinary flow at the bladder outlet. (2) It may be encountered, therefore, as a congenital or an acquired condition. (3) Inflammation plays the important role in most instances, for it is either predisposed by the existence of an obstruction or is itself the cause of the growth of pathological tissue by which the obstruction is produced. (4) This dual condition of inflammation and obstruction might be termed the symptom-complex of contracture. Careful cystoscopic investigation and clinical study of each case are essential to diagnosis. (5) While its different pathological forms are to be identified, it is mainly to be distinguished from the other two major maladies that occur in the same vicinity, namely, benign prostatic hypertrophy and malignant neoplasm. (6) As to pathology, the structure composing contracture of the bladder outlet is that of the histological tissue proper of the region and such pathological changes as may be added thereupon. These changes consist of (a) congenital distortions, (b) hypertrophies, (c) sclerosis. The last is most characteristic. (7) As to treatment, these conditions have been attacked by open and closed methods of operating, comprising single incision, multiple incision with or without removal of one or more portions of the tissue involved. These incisions are made with the cutting instrument alone or in combinations with thermo-galvano-, or diathermic cauterization.

SARCOMA OF CHOROID*

By RAYMOND A. TOMASSENE, M. D., F.A.C.S.
of Wheeling, W. Va.

SARCOMA of the uveal tract, according to Collins, is a comparatively rare condition occurring about once in 3,000 cases of ocular disease. The age for sarcoma of the choroid is usually between forty and sixty but occasionally it is seen at a much earlier period of life; however the disease is rare under the twentieth year. Men are more frequently affected than women, and the left eye, according to some statistics, is more apt to be involved than its fellow.

Sarcoma of the choroid passes through the four stages characteristic of all intraocular malignant growths: (1) Preglaucomatous stage, (2) secondary glaucoma, (3) extraocular extension, (4) metastasis.

In the first stage it is visible only with the ophthalmoscope and there is detachment of the retina with impaired vision, this detachment is smoother than the detachment from other causes and not thrown into folds, but these differences are not always well marked. In the absence of myopia, and with no history of injury, detachment of the retina occurring past forty always arouses suspicion of a tumor. In certain cases instead of there being a simple detachment of the retina the ophthalmoscopic shows a smooth, glistening, and more or less hemispherical small black growth projecting from the posterior coat of the eyeball.

Primary sarcoma of the choroid is always single. It may be nodular and arise from a broad base, projecting into the vitreous chamber in the shape of a knot-like process. It is sometimes constricted at its base forming the neck of the tumor. In the early stages the free surface of the tumor is relatively smooth and is covered by retinal pigment and lamina vitrea. When the lamina vitrea gives way over the apex of the neoplasm, the growth projects through the opening and develops more rapidly. The retina over the tumor becomes detached.

The tumor develops from the outer layers of the choroid and grows inward. The cells are round or spindle form or occasionally of a large endotheloid type. They are usually pigmented, with many broad vessels around which the cells may be grouped. The old division into melanotic and leuco-sarcoma, founded upon the presence or absence of pigment still persists, though it is often scientifically inaccurate or at least ambiguous. They may be divided according to form into circumscribed and diffuse, the latter according to Parsons, being extremely rare.

In the second stage of sarcoma of the choroid the eye presents the symptoms of acute glaucoma; this being the typical outcome of continued development of the tumor. This is due to encroachment upon the intraocular space, whereby the retina and vitreous are pressed upon, the pressure being transmitted to the lens, which is forced forward so that the periphery of the iris is brought in contact with the back of the cornea. The filtration angle thus becomes blocked, and the intraocular tension rises. The situation of the tumor is of importance, for it may be such as to obstruct the exit of blood by the veins. Extra bulbar extension of the growth or the so-called third stage takes place along the perforating vessels. The growth breaks through the neighboring scleroctic, either anteriorly or more frequently posteriorly invading the orbit.

The fourth stage consists of metastasis, which, in the great majority of cases, is to the liver. It is of great importance to remember, however, that these stages do not always follow in regular sequence, but the metastasis may and often does occur while the growth is still confined to the eyeball.

Case Report. Mrs. M. V. F., age 59, was referred to me on January ninth, 1925, by a

* Read before the Eye, Ear, Nose and Throat Section of the W. Va. State Medical Association at its fifty-eighth meeting at Bluefield, W. Va.

local optician. Her history at that time was gradual impairment of vision in her right eye for the past six months, with some distortion of objects. No pain, no inflammation of any nature. Her vision had slipped to 6/20 when she thought her glasses required some change several months ago. When I saw her the vision in the right eye was 6/60 left eye gave perfect vision with the correction of a slight hypermetropia. Examination revealed a well defined globoid mass projecting forward in the region of the ciliary body on temporial side. The retina was smooth and well defined, being simply stretched over the tumor. The optic disc was hazy, somewhat veiled and cup almost closed.

The patient was told that she had a growth in her eye and was advised to return in a week for further study. When she came back the diagnosis of sarcoma of the choroid was confirmed and enucleation with usual implantation of a glass ball was performed. There were no complications and the patient has reported from time to time to check up on her progress. Microscopic examination gave the following report: The tumor mass is found to be very cellular with a corresponding lack of stromatogenous elements. The cells are closely placed and are quite regular in regard to size, but bear no fixed relationship to each other or to the supporting tissues. The type of cell varies from the typical spindle cell which predominates, through imperceptible gradations to the small round cell. There is no evidence of invasion of the outer coats of the eye, the nerve trunk or the retina. *Diagnosis*, spindle cell sarcoma of choroid.

How often sarcoma starts in the choroid but never develops sufficiently to attract attention and lea dto a diagnosis we have no means of knowing. But it is remarkable that several cases of the kind are to be found in the literature.

FRACTURES OF UPPER THIRD OF HUMERUS *

By E. BENNETTE HENSON, M. D.
Charleston, W. Va.

IN ANY SERIES OF CASES of fractures of the upper third of the humerus the end results are disappointing when measured in terms of function. Henderson states that, as a result of a study of a number of cases of injury to the shoulder joint, he finds that the motion most often complained of by the patient is that of upward and outward rotation and elevation; also that failure to obtain this motion is due not only to arthritis in the joint but to callus production resulting from fracture, tending to obstruct these two motions.

In the past the methods used in the treatment of fractures at or near the tuberosity of the humerus allowed the exuberant callus and new bone to block the sliding of the greater tuberosity under the acromion and as a result the patient would be unable to put the hand behind the head. In other words, the patient is unable to place the arm in abduction, outward rotation and elevation.

Dr. J. W. Sever of Boston, a few years ago emphasized the importance of treating all cases of fractures of the shoulder joint by traction in abduction, outward rotation and elevation and devised a brace for that purpose. By treating these fractures in the manner above described, he was able to prevent the blocking of the greater tuberosity by new bone formation. In review of the literature, there is little that calls attention to the necessity of treating these types of fractures by abduction. Some advocate abduction, it is true, but usually not over 45 degrees, but the arm is always in inward rotation of the humerus. This inward rotation is directly opposite what is wanted.

Old Methods Wrong (Anatomically).

All the methods devised, such as the Middledrop triangle, the Penhallow - Osgood splint, the wedge shaped pad in the axilla with a shoulder strap, the Red Cross basic splint are all more or less popular but are wrong anatomically and when measured in

* Read before the Kanawha Medical Society, Charleston.

function they are unsatisfactory. Whitman treats in some abduction but carries the arm forward in inward rotation and holds it in shoulder spica. Albee uses traction temporarily, the arm is dressed in plaster spica holding the arm markedly rotated inward

FIGURE 1

Showing method of treating fracture of upper third of humerus by elevation, abduction and outward rotation.

and carried forward so that the humerus is almost parallel to the sagittal plane. Robert Jones uses abduction and traction but does not approve of passive motion before the fourth week.

Mechanics of the Fracture

These fractures are generally caused by a fall, with the arm held in abduction, the hand pronated and the humerus inwardly rotated. As a result of this position, the tuberosity of the humerus comes forcibly into contact with the tip of the acromion. The injury is (1) the tuberosity is broken off, (2) a frac-

In fractures alone of the greater tuberosity, there are two main types, one in which there is merely a crack running through the base of the tuberosity, and one in which the tuberosity as a whole is pulled forcibly off and rotated backward and outward. The latter condition is due to the pull of the supraspinatus, infraspinatus and teres minor muscles. Any attempt to reduce this fracture in any position other than outward rotation, elevation and abduction of the humerus will, of course, fail.

In fractures of the neck of the humerus, the distal fragment, (the shaft of the humerus) is always in inward rotation due to the unopposed pull of the pectoralis major, lassimus dorsi and teres major muscles, and probably some upward displacement of the shaft due to the unopposed pull of the triceps, biceps and coraco brachialis.

Treatment.

The logical treatment therefore is traction by adhesive applied to the arm with the forearm in flexion and supination. In adults a weight of ten pounds is usually sufficient. I prefer to treat these cases in bed with a Balkan frame in order to procure continuous traction in the corrected position. When sufficient callus has been thrown out to hold the fragments in alignment a plaster cast is applied in the corrected position of abduction, elevation and outward rotation.

The top of the cast is cut in such manner to allow daily massage. There is no reason to prevent the cutting of the cast sufficiently to allow passive motion, but personally I am of the opinion that enough motion is obtained by the patient when up and about in the cast to make passive motion, so called, a mere ture of the neck of the humerus, (3) a dislocation of the humerus, or (4) any combination of these.

luxury to be indulged in by those who desire it.

The number of patients treated in this manner has not been large but the results obtained have been uniformly good in all types of fracture. One case which on account of extreme age is reported.

Mr. J. T., a stable boss, age 72, was admitted to the Charleston General Hospital, July 5, 1923, with fracture of the right humerus through the surgical neck with three-fourths inch overlapping, (type of fractures as described under type No. 2). Patient was put to bed with a Balkan frame attachment. A large strip of adhesive plaster was applied to either side of arm and allowed to extend beyond elbow with the forearm flexed to a right angle. A ten pound weight was then applied to the arm with forearm supported by slings so that the traction on the arm would be in abduction and external rotation. This treatment was continued for two weeks, then at the bed-side without removing any of the traction a plaster of paris body cast was applied (fig. 1) with the arm and forearm encased in the position of abduction, outward

rotation and elevation. The cast was worn in comfort for three weeks before being removed. The union of fracture was firm with good position and the function of the shoulder joint was all that could have been desired. He was able to fasten the back collar button on his shirt which is the severest test of all. When the arm was brought against the thorax it could be elevated without much discomfort. Before leaving the hospital function was excellent.

Conclusion.

1. Older methods of treating fracture of upper third of humerus when measured in terms of function have failed.

2. Treatment by traction with humerus in abduction, outward rotation and elevation and maintained in that position until healing takes place produces earlier and better function than any other method of treatment.

3. The position of outward rotation and abduction of the humerus in the horizontal plane is the best anatomical position for healing of fractures of upper third of that bone.

TREATMENT OF PUERPERAL SEPSIS

Dr. B. H. Gray (*Virginia Medical Monthly*, January, 1925), says the pathogenic organisms of puerperal sepsis may be found in 45 to 75 per cent of the post-abortal or post-partum uterus. He stresses the importance of prophylaxis in prenatal care and during labor and early days of the puerperium. In treatment he reminds us of the large wound presented by the inner surface of the uterus and calls attention to the futility of intrauterine treatment. His main idea is:

"*Maintenance of drainage and retraction of the uterus* are the two important factors in all cases.

"*Drainage* is accomplished by changing the position of the patient from side to side and by placing the bed in the modified Fowler position.

"*Retraction of the uterus* aids drainage and tends to shut off the lymphatics: the use of pituitrin and ergot serves to aid retraction.

"When there are infected wounds of perineum or cervix, sutures should be removed and the surfaces swabbed with iodine or mercurochrome, and free drainage established.

"Cultures of the vagina and uterus should be taken to identify if possible the type of the infective organism.

"It is a well-known fact that the action of certain bacteria may be limited to a local tissue reaction and thus a localized infection, while in others with a greater virulence the tendency is for the infection to spread through the lymphatics and blood vessels and then cause more generalized infections."

He condemns indiscriminate use of the curette and says:

"It is the writer's personal conviction that the only indication for invading the cavity of the uterus is to control hemorrhage which is rare."

When the infection extends beyond the cavity of the uterus, he says:

"Locally, icebag over the lower abdomen, elevation to the Fowler position to drain the lymphatics, and opium to relieve pain are indicated; catharsis should be avoided."

He calls attention to favorable comments on use of milk injections, cul-de-sac drainage for pus, ligation of veins in thrombo phlebitis, mercurochrome for blood stream infections and favors blood transfusions instead of serum treatment. Among his conclusions are these:

"The eradication of foci of infection, such as the tonsils, teeth, gonorrhoea, etc.

"Abstinence of the marital relationship after the sixth or seventh month. This is frequently overlooked precaution and is responsible for a number of unexplained cases.

"Checking up the case in the latter months of pregnancy to determine as far as possible the outcome of labor, and formulating a plan according to conditions as they obtain.

"When internal manipulation is necessary, scrupulous asepsis should be observed and traumatism reduced to the minimum.

"Isolated cases of infection will occur in spite of all the measures we may observe.

"Encourage retraction of the uterus and drainage by:

"(a) Administration of ergot pituitrin.

"(b) Posture for drainage.

"Avoidance of catharsis."

C. A. R.

THE WEST VIRGINIA MEDICAL JOURNAL

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS

J. HOWARD ANDERSON, Marytown — WALTER E. VEST, Huntington — CHARLES W. WADDELL, Fairmont — HARRY M. HALL, Wheeling

THE JOURNAL issued on the first of each month. Entered as second-class matter, January 1, 1926. Acceptants for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Authorized July 24, 1919.

Subscription to Members ..... $2.00 Per Year
Subscription to Non-Members ..... $3.50 Per Year
Single Copies ..... 35 Cents

OFFICERS

President:
J. R. BLOSS ..... Huntington

First Vice-President:
R. O. ROGERS ..... Bluefield

Second Vice-President:
H. C. SKAGGS ..... Montgomery

Third Vice-President:
D. A. MACGREGOR ..... Wheeling

Treasurer:
HUGH G. NICHOLSON ..... Charleston

Executive Secretary:
MR. STERRETT O. NEALE ..... Charleston

Delegate to A. M. A., 1926:
J. R. BLOSS ..... Huntington
C. R. OGDEN, *Alternate* ..... Clarksburg

Delegate to A. M. A., 1926-27:
H. P. LINSZ ..... Wheeling
R. A. ASHWORTH, *Alternate* ..... Moundsville

COUNCILORS

First District:
H. P. LINSZ, (1-year term) ..... Wheeling
C. G. MORGAN, (2-year term) ..... Moundsville

Second District:
C. H. MAXWELL, (1-year term) ..... Morgantown
C. H. HALL, (2-year term), ... Elkins

Third District:
JOHN FOLK, (1-year term) ..... Bridgeport
C. R. OGDEN, (2-year term) ..... Clarksburg

Fourth District:
J. E. RADER, (1-year term) ..... Huntington
W. E. VEST, (2-year term) ..... Huntington

Fifth District:
J. H. ANDERSON, (1-year term) ..... Marytown
H. G. STEELE, (2-year term) ..... Bluefield

Sixth District:
R. H. DUNN, (1-year term) ..... South Charleston
C. A. RAY, (2-year term) ..... Charleston

¶ All original articles for THE JOURNAL must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

¶ Our readers are requested to send marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

¶ It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

¶ Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

¶ Advertising forms will go to press not later than the tenth of each month. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

¶ Should be made by check, draft, money order, express or order or registered letter to Sterrett O. Neale, 211 Smallridge Building, Charleston, W. Va.

STANDING COMMITTEES

Medical Defense Committee

H. P. Linsz, Wheeling; C. R. Ogden, Clarksburg; C. G. Morgan, Moundsville.

Committee on Scientific Work

G. H. Barksdale, Charleston; O. D. Barker, Parkersburg; D. A. MacGregor, Wheeling, Scientific Secretary.

Public Policy and Legislative Committee

C. A. Ray, Charleston; G. A. MacQueen, Charleston; R. H. Walker, Charleston; James McClung, Richwood; J. R. Bloss, Huntington; D. A. MacGregor, Wheeling.

Committee on Hospitals

Robert J. Reed, Wheeling; B. H. Swint, Charleston; R. J. Wilkinson, Huntington.

Committee on Professional Relations

J. R. Shultz, Charleston, chairman, (3-year term); H. G. Nicholson, Charleston, (1-year term); H. R. Johnson, Fairmont, (2-year term); A. G. Rutherford, Welch, (4-year term); W. R. Goff, Parkersburg, (5-year term).

Surgical Section

E. Bennett Henson, Charleston, chairman; W. R. Goff, Parkersburg, secretary.

Eye, Ear, Nose and Throat Section

T. W. Moore, Huntington, chairman; R. A. Tomassene, Wheeling, secretary.

Woman's Auxiliary

President, Mrs. A. G. Rutherford, Welch; *First Vice President*, Mrs. W. H. St. Clair, Bluefield; *Second Vice President*, Mrs. J. P. Lilly, Morgantown; *Secretary*, Mrs. C. M. Scott, Bluefield; *Treasurer*, Mrs. C. A. Ray, Charleston.

EDITORIAL

RECONSTRUCTION NEEDED

Perfection is a guiding star which should be pursued, though seldom is possessed, in the daily activities of life. It has been said that there is more pleasure in pursuit than in possession. A satisfied and contented individual is usually non-productive and not interested in personal or community growth, an unfortunate situation for society in general. History records that the worth while achievements of the past have been wrought out by men and women who were not satisfied with the existing conditions of the age in which they lived. Their active egotistic minds were controlled by an altruistic disposition which stimulated them on to the solution of the problems of their generation. It is not easy to separate the wheat from the chaff, the gold from the dross. Up through the ages mankind has made a continuous struggle for mental and moral attainment. The errors of yesterday, the achievements of today and the possibilities of tomorrow are vital factors towards raising the qualifications of a civilization that should be more or less perfect in its manifestations.

Today the regular medical profession is far from being perfect or ideal, in either its artistic or scientific fields. To say the least the profession falls short of the desired goal in perfection. The vast majority of our members are cognizant of the fact, and are doing their utmost to improve the art and science of medicine. Perhaps no other learned profession has made as much progress the last fifty years as the medical. And the benefits of the achievements and developments of the medical profession have been given to all the now known world without prohibitive patents or copy-rights.

The regular medical profession is not threatened at the present time, nor will it be in the future, from cults or pseudo-scientists, as some of our members are prone to believe. In my opinion the greatest obstacles that confront the medical profession, arise and are supported from within our own ranks. The medical profession no doubt is responsible in a large measure for the founding and licensing of cult practice. If our standard medical colleges three or four decades ago, would have anticipated and combatted these cults, they would not have made such inroads into society. Foresight on their part would have easily eliminated much that is undesirable within our profession, as well as the unsupported claims of cult practice.

Since the close of active hostilities along the western front in 1918, modern society in America and elsewhere is undergoing reconstruction. This reconstruction has penetrated into the highways and byways of our profession. Let us discuss some phases of our professional life that need reconstruction.

Physicians as well as other people are human, the hope of reward financial or otherwise goes a long way towards causing them to render their best service. Since the World War there has been a tendency towards the establishment of free clinics throughout our state. In most instances these clinics have done as much harm as they have good, because clinics of this nature often times will make charity out of a self-supporting citizen. People enjoy receiving something for nothing, and they seldom pass an opportunity of taking advantage of such institutions. The state, counties and municipalities should act with discretion regarding the establishing and managing of free clinics.

It is true that some physicians are not frank with their patients professionally. They seem to think that it is disgraceful to be unable to make a quick accurate diagnosis. Hedging to them is more desirable than saying, "I do not know". Sooner or later the majority of patients will learn of this type of dishonesty. A physician should be man enough to refer a patient to some other physician for diagnosis or treatment when he feels that the occasion demands it, if he does not do this he betrays his trust.

There is an economic rule which holds

good the world over that we value an article or entity in proportion to what we pay for it. The medical profession has been very slow in appreciating the significance of this rule in its application to the profession from a financial standpoint. Until within recent years doctors left the impression with their patients and the public that professional finances were of a secondary importance. As a result of this impression the public drifted into a careless frame of mind with regard to the paying for medical and surgical services. No other profession does as much gratuity, waits as long for their financial reward or serves as many "dead-beats" as the medical profession. The profession is entirely responsible for this condition of affairs. The amount of money that should be collected by the medical profession of West Virginia each year, and is not collected is a shame and a disgrace and a hardship on the profession. I believe that within the next five years the profession in our state will take sensible and if necessary drastic steps to remedy this long existing evil.

The educational campaign that was planned by the State Medical Association the past year and is now being put into effect throughout the state this year will mean much to the citizenship of West Virginia. The increase and diffusion of medical information will be advantageous to all localities in our little mountain state. Knowledge is power, while ignorance is sin and a disgrace. The committee that is putting across this campaign should receive the support of every licensed physician in West Virginia. The campaign can and will do much good and is not intended to boost the private interests of the State Medical Association.

Over one-third of the doctors of West Virginia are not active in their county and state medical societies. Until we get the majority of West Virginia doctors contributing financially and otherwise to the societies in which they should be interested, the medical profession of our state is handicapped. We must have a full cooperation from all licensed practitioners in the state.

Unjust or uncalled for criticism by a doctor who is interested in his profession and who is trying to render good services to his patients, regarding other members of the profession is unnecessary and unfair. Conduct of this nature is not only injurious to the physician who is being singed but to the entire medical profession as well.

R. K.

———o———

THE PUBLIC HEALTH LAW

It is an unfortunate state of affairs when men in public life reach the point of selfish aggrandizement in lieu of the public's interest and welfare they are supposed to promote and guard. The men who make laws as well as those who execute them are responsible in great measure for conditions existing in West Virginia which all good people deplore. We, of course, refer to conditions effecting the public health. There are laws on our statute books affecting the public health which are a shame and disgrace to our state and surely we cannot attribute their passage to ignorance on the part of legislators.

One law which is a menace to public health, cost the people of West Virginia, according to the statement of a high state official, $50,000 to secure its passage. That immense sum of money should not be charged up to ignorance on the part of legislators. There should be a column on the balance sheet of public records for pet measures, trades, hours for sleep, absent and not voting for fear of making somebody "mad", and a desire to be reelected or elevated to some higher official position. It is perfectly human to aspire to high honors and we admire an honest man for his aspirations, but unfortunately, there are many who would NOT "rather be right than be President".

We have many good laws which are not enforced and one of the most important is the County Public Health Unit. In their spirit of altruism, notwithstanding the fact they are accused of selfish purposes in many of their efforts, the doctors of West Virginia were instrumental in having passed the act empowering county courts to establish in their respective counties, full time local health units and employ competent physicians as administrators. Section 3, Chapter

150, says the county court may establish such an office and appropriate a fund sufficient to administer the same, provided it does not exceed the sum of three cents on the one hundred dollars valuation of assessable property. Of the fifty-four counties in the state, ten have put this law into effect. In these ten counties, the total assessed valuation is $573,000,000 allowing a sum of $161,900 which could be used for this purpose. The lowest valuation of these is $19,000,000 which would allow $5,700, while the highest is $141,000,000 allowing $42,300. We have authoritative information that the maximum salary paid the doctors for their services in these ten counties is $4,000 per year with $1,000 additional for expenses or about one-third of what is allowed by the law.

The public is getting the service of men who are highly educated, stand high in their profession and have special training in this line of work. In many instances, they give up a lucrative practice, or prospects for future success to engage in public health work, knowing that if they ever return to general practice they are under handicap. Yet these specially trained physicians are asked to work for a mere pittance.

We do not advocate extravagant expenditures but doctors who devote their whole time to the preservation of the health of our citizens should receive compensation commensurate with ability and labor.

If this law is a good thing for ten counties it would be better for the whole state. We are of the opinion that Section 3, Chapter 150, should be changed or amended making it mandatory upon the county courts to establish health units in each county.

Health regulations should apply to the state as a whole as do the road laws. There are many ways by which diseases are transmitted from one place to another, even in the most remote parts of the state, as we all know. A state levy of less than two cents on the $100 valuation would produce sufficient funds for health units in each of the 54 counties with an average of more than $9,000 for each county.

If the law is amended and so changed as to lay a state levy and place its execution in the state public health council's hands where it should be, thousands of dollars needlessly expended could be saved and great good for the public health attained. C. A. R.

———o———

"CARD OF THANKS"

Members of the publication committee take this opportunity to express their gratification of the interest being manifested by members of the profession from all parts of the state in the improving and upbuilding of *The Journal.* We are daily receiving society reports, news items, abstracts and papers for publication from men who have heretofore been willing to remain silent and depend on a few to do it all. We are having many suggestions, all of which we will carefully consider and will be glad to utilize them in our work. We have on file a number of splendid papers which will appear in subsequent issues as the committee deems appropriate. We continue to solicit contributions from the "silent" members of the association through the publication of which we hope not only to enhance the value of the *West Virginia Medical Journal* to our readers but advertise the talent, within the confines of our little mountain state, which has all these years been lying dormant.

This *Journal,* through exchange, reaches the editors of every state journal in the United States and we are pleased to note in many of them, abstracts from papers by our members, which is evidence of their worth. *The West Virginia Medical Journal* is going to improve and grow in proportion to the contributions and support of the state association and the present indications are sufficiently encouraging to arouse our enthusiasm to the point of assuring our readers that they will soon have a publication of which you may justly feel proud. If you, who have been on the silent list, would have a part in this great work, at least "join in the chorus" and send in your contributions, *The Journal* could not help but be a success.

C. A. R.

———o———

AN APPRECIATION

The following editorial was published in *The Charleston Gazette,* one of the state's largest newspapers, on Wednesday, January

6, after the Professional Relations' committee had inaugurated its series of 52 educational articles on "Keeping Well":

"The West Virginia State Medical Association has just released to the press of the state the first of a series of fifty-two health features which are to be released weekly. The articles have been prepared by specialists, all members of the association. Their object is to awaken the public to the necessity of helping physicians in preventing sickness. It is just another variation of the old maxim about the ounce of prevention.

"We think that our doctors are doing a good work in laying out this campaign. It is not an attempt to lure people into their offices just to find something the matter with them. Quite the contrary. The ethical practitioner of today—and the standard of our West Virginia practitioners is high, we are glad to say—is interested in keeping everyone well; they feel that that is their function. In China, the family doctor is paid as long as everyone is well; as soon as anyone becomes sick the salary ceases.

"There is no use denying the fact that most of us are neglectful of our health. When we sit down to think it over we know that it would be a wise thing if we would interview a doctor once or twice a year and have ourselves thoroughly gone over. In this way we might save much trouble later on. Again, we say that we are with our doctors in their campaign. We will look forward to their weekly articles with interest."

Such cooperation on the part of the press means much in its relation to the campaign of preventive medicine. Keeping well is the most important matter before the public today and if the public can be induced through education to obtain periodical health examinations disease will be reduced to a minimum.

———o———

YOUR INCOME TAXES

Since income taxes soon must be paid, attention is called to the rather queer ruling of the commissioner of internal revenue, Washington, D. C. A recent communication from Collector Brast, Parkersburg, quotes the commissioner's ruling as follows:

"Amounts expended by a physician for railroad and Pullman fares and hotel bills in attending a medical convention are not ordinary and necessary expenses incurred in the pursuit of his profession and do not constitute allowable deductions in his return.

"Expenses incurred by doctors in taking post-graduate courses are deemed to be in the nature of personal expenses and not deductible."

Let us look at this ruling impartially. Physicians and surgeons attend their county, state and national medical meetings to gain what knowledge they can as to the other fellows' methods of combatting and treatment of disease. They often devote from two to four weeks a year in post-graduate study to better equip themselves to give service to their patients.

It takes a rather long imagination to so construe these expenditures as being "Personal." Rather, they should come under the heading of "PUBLIC EXPENDITURES," and be included in legal deductions because, after all, it is the public who benefits.

The commissioner has placed doctors in the same class with the lawyer and the school teacher. Apparently no consideration was given to the fact that doctors must continually deal with the future whereas the lawyer continually looks for past precedent and the school teacher has a textbook within the confines of which he or she must keep.

Since the public at large benefits from the doctor's expenditures in attendance upon medical society meetings and taking post-graduate courses, the public should join with the medical profession in seeking reversal of this ruling.

The communication from Collector Brast relates those things, however, which are deductible items in making out income tax returns. They include:

Cost of supplies used in practice.

Expense in operation, repair of auto used in professional calls.

Dues to the county and state organizations.

Subscriptions to professional journals.

Office rent.

Expense such as light, heat, water, telephone.

Salaries paid office assistants.

Amounts currently expended for books, furniture and professional instruments and equipment, the useful life of which is short.

On office furniture and fixtures which have a useful life of more than one year, a reasonable allowance may be deducted for depreciation.

In conclusion it might be well to note particularly that the internal revenue commissioner says that dues paid to your county and state medical organizations do constitute NECESSARY expenses and therefore are deductable.

———o———

HAVE WE AN EPIDEMIC?

In county medical societies during the Winter there has been much general discussion of a mysterious new disease that has been referred to generally as catarrhal jaundice while in other localities it appeared as an epidemic of intestinal obstruction.

At a recent meeting of the Kanawha County Society at which Dr. W. E. Vest read an interesting paper on The Gatro-Intestinal History (see *West Virginia Medical Journal*, January, 1926, page 19) several members reported having had cases under their care. One said a teacher in Junior High school had asked him if there was an epidemic of jaundice since she had four students absent from her room at the same time, all suffering from the same ailment.

Reports of similar cases have been heard of as originating in other cities. Now comes Dr. Harry M. Hall, associate editor, with this statement:

"We do not know how it has been elsewhere but if there is such a highly improbable thing as an epidemic of intestinal obstruction it has certainly been a fact here in Wheeling. It is not confined to any single surgeon or doctor but everybody for awhile seemed to have a case under his care. Heart-to-heart talks at staff meetings developed nothing new. It would be interesting to have reports from other localities on this matter. The dubious popularity of this condition seems to have passed but it was a matter of concern while it lasted. It may have been a matter of coincidence but did not look it."

Accordingly, *The Journal* calls for reports on this condition that has existed and may be existing even now. If it has scientific basis as a general condition, its progress and distinguishing characteristics should be of great interest to the profession of the state.

———o———

SERVICE!

As the time comes to pay the yearly dues, there are still some men here and there who cannot see the necessity of a full-time, paid secretary. The physical aspects of the new *Journal* are largely due to his work. There is enough new advertising obtained by his labors to justify his existence. Furthermore, probably not a man on the new editorial board would serve if he had to take care of the large volume of business now necessary to conduct a modern state medical journal. The reviewing of the papers alone is a heavy tax on the editorial board. It would be an impossibility to look after the purely business side of the association as now conceived on the new lines. And it is only in its infancy.

The members throughout the state have as yet made no effort to acquaint themselves with the possibilities of the secretary's service. The next time you have any perplexing question on any matter relating to your profession or business in Charleston, write to him and see the result. We have seen everything from obtaining a license plate speedily to a claim, lying dormant in the compensation department, quickly ironed out. Inquire of anyone carrying on your desires in the professional side of the association or *The Journal* if they could carry on without a secretary. The answer would promptly be, "Not at all". How Dr. James Bloss ever managed to carry on his large practice and turn out the kind of a journal he did, will ever remain a mystery to us all. He simply used up part of his time that should have, in justice to himself, been used somewhere else.

HARRY M. HALL.

REPORTS FROM COMPONENT SOCIETIES

Raleigh County

The Raleigh County Medical Society has had a very successful year (1925) and we are making plans for a bigger and better year for 1926.

This society had a total paid up membership of forty-three, and only three physicians in the county who are not members of the local society. It is our aim to have 100 per cent for 1926.

The year 1925 was guided by Dr. Robert Wriston, who was president, and it is a great pleasure to say that he had the interest of the society at heart, and worked hard for a membership which was united behind a common cause.

On October 15th this society was the host to one of the largest gatherings of physicians ever held in this city. A fine program was put on both in the afternoon and evening. The physicians on the afternoon program were Dr. H. S. Ogilvie, Charleston, W. Va.; Dr. Lawrence T. Price, Richmond, Va.; Dr. J. R. Shultz, Charleston, W. Va.; Dr. D. R. Hill, Mabscott, W. Va., and Dr. Carl F. Raver, Charleston, W. Va.

The physicians on the evening program were Dr. Robert P. Bay, Baltimore, Md., and Dr. Charles L. Summers, Baltimore, Md.

At 6 p. m. a banquet was served on floor C of the Beckley Presbyterian Church, to about one hundred guests. Dr. Robert Wriston presided as toastmaster. Dr. Shultz of Charleston gave the opening address, and he was followed by Dr. Charles L. Summers and Dr. Robert P. Bay of Baltimore. Dr. U. G. Cook made the closing speech of the evening, telling of some of his experiences when he first began to practice in comparison with present day practice. He closed by reciting a poem written by himself entitled, "My Old Gum Coat."

While the banquet was being served a musical program was rendered by several artists under the direction of Mrs. Lillian Dupuy.

There were sixty-eight physicians present, and many from a distance.

Kanawha County Medical Society did us a great honor by so many joining hands with us in making the meeting a success. Those who attended the meeting were loud in their praise of the meeting, and many said it was one of the best they had ever attended.

We have had the hearty cooperation of the entire membership of the society, and we feel that we have a progressive class of physicians who are looking ever to higher ideals, and for an opportunity to better the condition of the physicians in general.

The destinies of the society will be guided in 1926 by Dr. Ross P. Daniel, president; Drs. E. H. Hedrick and D. L. Hill, vice presidents; K. M. Jarrell, secretary-treasurer.

K. M. JARRELL, *Secretary.*

Kanawha Medical Society

(Kanawha-Clay-Putnam-Boone)

The first meeting of the new year was held in the Kanawha Hotel, Charleston, on the evening of the fifth of January.

R. K. Buford, president.

Walter Point, vice president.

T. M. Barber, secretary and treasurer.

Dr. C. A. Ray made a short address as outgoing president.

Dr. Walter Vest of Huntington read a paper on the "Gastrointestinal History" in which he covered the symptoms referable to disease of the gastrointestinal tract very fully. Dr. Barksdale gave a pithy discussion and a wide general discussion followed. Dr. Mendeloff of Charleston read a paper on "Medical Biliary Drainage" and advocated its use in a number of conditions.

Dr. H. L. Robertson discussed this subject after which opinions of other members were aired.

Dr. J. R. Shultz, chairman of the professional relations committee, advocated the founding of a Professional Credit Men's Exchange Bureau under the management of Mr.

Patton of Charleston. The society carried a motion to endorse this plan. Members were urged to turn all their past due accounts over to this one agency for collection, thus facilitating the establishment of a "black list" which will be sent monthly to members of the society only.

Physicians in this territory were pleased to learn that the Oil City Gasoline stations and the Midland Gas and Oil Company will sell gasoline at one cent reduction on the gallon to doctors who announce themselves as such.

Members of this society are pleased to learn of the presence of Dr. John W. Moore on the S. S. Celtic approaching these shores. Dr. Moore has spent the last three years as medical missionary at the Elizabeth Blake Hospital at Soochow, China. He is listed as surgeon, secretary-treasurer on the staff of that hospital and Mrs. Moore as superintendent of nurses. The hospital bulletin of 1924 gives the number of inpatients as 1,608 and the daily average of 104. The outpatients numbered 5,436.

Dr. Moore is expected in Charleston within a short time and it is hoped his plans include continuance of the work he left on going to the mission field.

T. M. BARBER, *Secretary.*

Mercer County

The annual banquet and regular monthly meeting of the Mercer County Medical Society was held at the Hotel West Virginian in Bluefield, January 14. More than a hundred persons were in attendance.

As a special feature of this occasion a ladies' auxiliary of the Mercer County Medical Society was organized and the following officers were elected: Mrs. W. W. Harloe, Matoaka, president; Mrs. Ben W. Bird, Princeton, first vice president; Mrs. E. W. Horton, Bluefield, second vice president; Mrs. A. H. Hoge, Bluefield, secretary-treasurer.

The auxiliary was organized with about fifteen members and the by-laws and constitution were adopted.

Mrs. C. M. Scott of Bluefield, secretary of state organization, and Mrs. W. H. St. Clair, also of Bluefield, and who is an officer of the state auxiliary, were present and gave very interesting talks regarding the work similar societies are doing in West Virginia.

The banquet was served at 6:30 o'clock in splendid style and pleasing manner. Dr. O. S. Hare presided as toastmaster. There were no after-dinner speeches but a very fine entertainment program was rendered as follows:

Violin solo, Vincent Paoliello.
Cello solo, Dr. Harry Haggart.
Piano solo, James Elmer Brown.
Violin solo, Miss Helen Mitchell.
Vocal solo, Miss Ruth Bodell.
Banjo obligato, Conrad Brevick.
Selections, Roy Scott Post, American Legion quartet.

While the ladies' auxiliary was being organized the Mercer County Medical Society held its scientific program and regular business meeting.

The society expressed regret at the inability of Dr. Hanson S. Ogilvie of Charleston, to be present to take part in the meeting, but in his stead Dr. J. E. Blaydes of Bluefield, gave a very fine paper on "Some Thoughts for the General Practitioner in Regard to Nasal Accessory Sinus Disease". Dr. W. Ross Morris of Alpoca, had a paper on "Tetany," with a report of a fatal case following subcutaneous administration of sodium bicarbonate.

Both of these papers were freely discussed by all the doctors present.

Dr. T. M. Turner, of Springton was elected member of the society.

Dr. A. H. Hoge, Dr. R. O. Rogers and Dr. W. H. Wallingford, the latter being from Princeton, were elected as the professional relations committee, and Dr. H. G. Steele, Dr. A. H. Hoge and Dr. W. H. St. Clair were elected on a special committee to work with the new organization of the ladies' auxiliary.

The next regular meeting of the society will be held on the third Thursday in February, at Bluefield.

Marshall County

We did it! A very enthusiastic meeting was held January 12, 1926, in the County Court room, Moundsville. The attendance

was a little under expectation, about the average of our meetings. Dr. O. P. Wilson, our faithful treasurer's absence was noted, on account of the illness of his son, whom we are glad to know is improving. Everyone present had a talk, including our enthusiastic ex-president, Dr. P. D. Barlow. One of the liveliest discussions was "Should the School Examiner Vaccinate for Diphtheria Free?" It was the opinion of nearly all present that he should not.

We are expecting A No. 1 papers from J. M. Skinner, M. D., and Roy C. Loudin, D. D. S., at our next meeting, February 9.

Dr. J. A. Striebich, our new president, was inducted into office, and made the following address:

"It is, indeed, a pleasure, as well as a privilege, to be the president of your—the Marshall County Medical Society. It is a pleasure to have this distinction, to preside at the meeting of one of the best societies in the State. I will do my best to carry the society through the year, and will ask the support of every member. Unless I have the support of each and every one of you it will be useless for me to fulfill my promise. You have selected me to guide your ship during the year, and I feel with the support of the members, that the Marshall County Medical Society will retain the good name it has always enjoyed. For the year, I am going to ask that you attend all the meetings, unless you have a good excuse. If you are absent, I would ask that you offer an excuse at the following meeting. I would also ask that you be on time at the meetings, and remain until all business is over. Let us have some good papers during the year; let us be sociable. Do not let us commercialize this wonderful profession of ours. It is more than the almighty dollar, and while we are living in a peculiar age, do not let the medical profession drift into the same rut. Let us have a standard of morals and ethics. Let us have one price, and the same attention. Do not let Dr. Jones go to the country three miles and charge $5.00 for the visit and have Dr. Smith make the same distance for a charge of $1.50 —only to have the patient return to the former Dr. Jones and inform him that he would have the same large practics as Dr. Smith if he would not charge so much. Let us give service to our patients and make a reasonable charge. Let me call your attention also to the collections. The butcher, the baker, the plumber and every merchant collects for his goods. Why should not the doctor? Your patients expect it, they will think more of you. If the mother can pay the barber 75c a week to have her hair bobbed, she can certainly afford to pay the doctor. No man has ever been made popular by working for nothing. There is an old saying about the doctor—"A physician never gets bread until he has no teeth to eat it." Let us have Life Insurance Companies pay a reasonable fee for giving our opinion on a case, instead of giving service for a pittance. They tell you it is a good advertisement for you. Just one more subject, and that is the pharmaceutical houses. Everyone has a better preparation, according to the label on the package. Why not get back to the old way—tell them what we want. Let us give our patients the best in us, and charge them for it."

The society then adopted the following amendment to its by-laws:

Whereas, some of our members think they have performed their duties to this society by paying dues and not attending any of its meetings, thereby taking no part in its scientific program, or the business affairs of the society, and thereby failing to promote friendly intercourse among physicians and guard and foster the material interests of its members, and by so doing, fail to aid the profession in becoming more capable and honorable within itself, more useful to the public in the prevention and cure of disease, thus defeating the purpose for which it was formed and exists, and,

Whereas, the society needs the attendance of its members more than it needs their money,

Therefore, be it resolved that the by-laws of this society be amended as follows: "Any member who does not attend at least three meetings during the year shall be dropped automatically unless excused by the censor."

The secretary was instructed to notify each member of the society's action.

W. B. HARTWIG, *Secretary.*

NOTES

Dr. C. C. Hedges, head of the Marshall County Health Unit was on the program for a paper, but was called out of town and was unable to present his paper. The meeting was turned into one of those good of the order affairs. A number of things were brought up and thrashed out. Dr. P. D. Barlow, of McMechen, who has acted as our very able presiding officer for four previous years made a very fine talk, as did Doctors Hartwig, Peck and Ashworth.

Sherwood, the fifteen-year-old son of Dr. O. P. Wilson, has been seriously ill, following an operation with drainage for a suppurative periostitis of his right thigh. Secondary hemorrhage necessitated a low ligation of the femoral artery. Blood transfusion was done three times. Dr. D. B. Ealy, of Moundsville, and Dr. Skinner, of McMechen, were each donors one time. It is not known even yet if the lad's leg can be saved, or if he can pull through with his life. However, all the many friends of the Doctor are hoping and praying for his boy's speedy recovery.

Doctors R. A. Ashworth and Charles G. Morgan, of Moundsville, and Dr. L. J. Stump, of Pocahona, Virginia, with seven other companions recently returned from Province of Quebec, Canada, with a remarkable story of being burned out in a hunting camp at 4:30 in the morning. The night was very stormy, so the doctors say, and the cold rain beat upon the hunters clad as they were in only their night clothes. Suffice to say, after many hardships they at last got out to civilization and wended their desolate way home. The ten hunters got fifteen deer and had a very enjoyable hunt, barring of course, the fire.

Dr. Morgan was badly cut about the face while escaping from the burning building. Some of the medical friends of the doctors hold the opinion that certain supplies which the hunters had stored in a chest got fire by spontaneous combustion. At least it was reputed to be very hot and potent stuff.

Doctor and Mrs. L. H. McCluskey, of Moundsville, had as their guests over the holidays their two sons, Merritt and Milton, who are taking their medical course at Western Reserve and their daughter, Helen, who is attending college at Wooster, Ohio.

Education seems to be quite a passion of the medical men of Moundsville. Dr. B. F. Bone has a son and daughter who will graduate at West Virginia University this year. Dr. R. A. Ashworth has his oldest son in our State University; while Dr. J. C. Peck is sending his nephew, Joseph Shelton out to Morgantown. Joseph Shelton has made his home with Uncle Joe Peck for nigh a dozen years.

Doctors O. P. Wilson, Dr. Billie Bonar and Charlie Morgan are members of the Moundsville School Board, Dr. Wilson being President. Up to a year ago, Dr. J. J. Duffy was also a member, but at the last election was not a candidate to succeed himself.

Dr. Phil Compton started with a gentleman from Pennsylvania to make a trip to Florida in the Pennsylvanian's fast cutter. The route was down the Ohio and Mississippi Rivers and across the Gulf of Mexico. The boat traveled too slow for Phil so he abandoned her at Parkersburg and came home.

Preston County

Preston County Medical Society held its regular Quarterly Meeting in the office of the County Health Unit, Kingwood, West Virginia, January 6, 1926.

Officers for the ensuing year were elected:

President, Dr. W. A. Welton, Terra Alta.

Vice-President, Dr. E. E. Watson, Albright.

Secretary-Treasurer, Dr. John Thames, Kingwood.

Professional Relations Committee:

3 years, Dr. J. G. Pettit, Hopemont.

2 years, Dr. W. F. Dailey, Terra Alta.

1 year, Dr. B. S. Rankin, Tunnelton.

Dr. John Thames was re-elected to represent the Society in the House of Delegates of the State Medical Association.

Summers County

At the annual election of officers January 5, G. L. Pence was elected president; and R. G. Broaddus was re-elected secretary of the Summers County society.

Ten of the twelve active members of the society have paid up for 1926 and indications are that the others will do so within a short time.

Meetings of this society are conducted the first Tuesday in each month at noon when a luncheon is served. Sessions are devoted to the discussion of scientific, local and statewide matters pertaining to the medical profession and doctors visiting in Hinton are cordially invited to attend.

Educational articles issued by the state professional relations committee are being published in our local papers and they are the source of much interest to the general public.

All of the members are much pleased with the new Journal.

Ohio County

The Ohio County Medical society recently has heard two very interesting speakers, Dr. Novak of Baltimore, and Dr. Polak of Brooklyn, both standing high in their chosen fields of gynecology and obstetrics. Both have a happy way of saying things and meaning what they say, indicating that the abrupt ending "AK" (not antikamnia) stands for pioneer work and confidence.

Dr. Novak discoursed, as he did before the state association, on "Uterine Bleeding." We recall too that he once talked for quite awhile on an evening in this city, on "Menstruation," which was one of the best lectures ever heard here. In speaking of Extract of Corpus Luteum he indicated the effect was largely a matter of the mind. Dr. MacGregor, on to discuss the lecture, went into this matter thoroughly, stating we had all used it as we thought with success. The speaker admitted it might help, but adhered to his original observations.

Dr. Polak talked on the "Toxemias of Pregnancy," and we recommend him to the scientific committee as a good man for the next state association program. We are inclined to think the doctor has exceptionally good results in his procedures, but he is so candid about other matters his satisfactory statistics are accepted as given. For instance, he has gone an incredible period with not a single forced delivery. He practically does not have to curette at all, and he does not resort in very many instances to any Ceasarean Sections. The things he warns against in the vomiting of pregnancy are quite simple and yet he holds them as extremely important. Of course, he deals quite generally upon diet. He holds intercourse, sexual and social, as two things to be excluded. He was asked if it wasn't a pretty big job to do this and he replied that it was, but he did it.

Dr. Polak allows no one in the room, as far as he can, and in this he seems to be successful, too. He puts a stop to sexual intercourse. Asked about Corpus Luteum, his answer was identical with that of Dr. Novak—it was a matter of the mind. His treatment of eclampsia was essentially simple, Trendelenburg position, diet, plenty of water, morphine under some circumstances. Strange to say, that is if you would follow the elect who sometimes have an opinion that West Virginia is a backward state, the treatment given by Dr. Polak is identical with that given by a physician in this state who occupies, generally speaking, an isolated place here. Like Banton, he has worked out his own therapeusis. Dr. Polak is an entertaining talker and was greeted by one of the largest audiences possible in this part of the state; and all were amply repaid.

Dr. Dandy of Baltimore, scheduled to appear January 8, cancelled his engagement at the last moment. It was a disappointed group that heard the news, many visitors from nearby cities being present. Dr. Dandy's lectures, as anyone who heard him in Bluefield knows, are events.

Cabell County

A regular meeting of the Cabell County Medical Society was held at the Hotel Prichard December 23, 1925, Dr. W. D. Hereford presiding.

The application of Dr. D. E. Musgrave of Barboursville, was read and turned over to the board of censors.

Dr. T. W. Moore moved that a letter of consolation be sent to Dr. S. E. Buffington upon the death of his wife.

Dr. Biern moved that a night letter be sent to Dr. R. E. Vickers who is sick in the Union Memorial Hospital, Baltimore, extending the season's greetings.

The Treasurer's report was read and shows a balance of $467.74.

There was no scientific program.

The election of officers for 1926 took place as follows:

President, Dr. J. A. Guthrie.

Vice President, Dr. W. Byrd Hunter.

Secretary, Dr. C. G. Willis.

Treasurer, Dr. R. M. Bobbitt.

Board of censors, Dr. W. W. Strange (for three years).

Delegates to State Convention, Drs. Marple, Beckner, Johnson, Vinson. Alternates, Hodges, I. W. Taylor, Hunter, Mathews.

Dr. W. E. Neal, Mayor of Huntington, was present and gave a very interesting talk regarding health conditions in the city.

The first regular meeting of the Cabell County Medical Society for the year 1926 was held January 14 at the Hotel Prichard.

Minutes of the previous meeting were read and approved. The new officers as elected at the last meeting were then installed.

The applications of Drs. D. E. McKonkey and Leo H. Mynes were received. Drs. D. E. Musgrave and Francis X. Schuller were elected to membership.

Dr. J. R. Shultz and Dr. H. G. Nicholson of Charleston, chairman and member of the State Professional Relations Committee, were present and gave very interesting talks regarding the work of this committee. They especially stressed the point of advertising in a legitimate way and which would be most beneficial to the public.

Discussion was opened by Dr. Rader, followed by Mr. Sterrett O. Neale, State secretary, and Dr. Wilkinson.

Dr. Biern reported that preparations for the Tri-State Meeting are nearing completion. He moved that the Society expend not to exceed $50.00 in helping entertain visiting members of the Tri-State society.

Dr. Vest moved that as Dr. Patrick Henry Swann has reached the age of 68 and has been a member of this society for 35 years, he be elected to honorary membership. Carried.

Bills for flowers and lettershop were ordered paid. The attendance, 38.

C. G. WILLIS, *Secretary.*

PETTIT AGAIN CHOSEN; GODBEY AT M'KENDREE

J. G. Pettit, who succeeded E. E. Clovis as superintendent of the State Tuberculosis Sanatorium at Hopemont in 1924, has been reappointed by Governor Gore. M. V. Godbey, Charleston physician, has been appointed superintendent of McKendree Hospital No. 2 at McKendree, Fayette county, succeeding Dr. H. L. Goodman, who has served since March 15, 1917, an appointee of the Democratic governor, Cornwell.

Dr. Pettit assumed his duties in May, 1924, Dr. Clovis resigning to move to Wheeling to become physician for an insurance company. Dr. Clovis had served for 13 years. Dr. Pettit formerly was connected with the state hospital at Weston.

Dr. Godbey is known throughout the state. In 1924 he was a candidate for the Republican nomination for United States senator. In 1924 he was elected state senator from this, the Eighth district, to fill the unexpired term of the late A. E. Scherr, and was reelected three years later. In 1908, when he was only 29 years old, he represented Boone county in the house of delegates. He is a native of Raleigh county and was educated in the public schools, Marshall College, Grant University and Maryland Medical College, Baltimore. In 1917 he was chief medical examiner for the workmen's compensation department. For a number of years he has been on the staff of several local hospitals.

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA

STATE AND GENERAL NEWS NOTES

PROGRESS OF MEDICAL EDUCATION IS SHOWN

Dr. N. P. Colwell, of the American Medcal association, reviews the progress in medical education during the last quarter century in a bulletin just issued by the United States Public Health Service. He shows that since 1900 a vigorous and successful campaign has been carried on for the improvement of medical education in this country. Previous to that time the increase in the number of medical schools was out of proportion to the population. During the Civil War, twenty medical schools ceased to exist or were suspended, thereby reducing the total number to forty-six, (there were only four medical schools for five million people in 1800). After the Civil War medical schools multiplied very rapidly so that by 1900 there were one hundred and sixty medical schools serving a population of seventy-five milion people. The maximum number of students and graduates was reached in 1904 when one hundred and sixty medical colleges enrolled over twenty-eight thousand students and graduated nearly six thousand physicians.

In the absence of Federal control, a voluntary agency, consisting of committees from the American Medical Association, began to stimulate a few states to create licensing boards and to begin some attempt at regulating the medical schools.

Publicity and public sentiment have played a large part in improving and enlarging the teaching plants.

The hospitals furnishing clinical instruction for these schools have likewise been greatly improved and their standards in every way have been raised.

It has become almost a routine for medical graduates to take hospital interneships and many of the medical schools are now requiring a carefully supervised hospital interneship before issuing a diploma. This hospital interneship unquestionably makes a better rounded and more competent physician.

Like other things, the cost of medical education has greatly increased. In 1920 and 1921 the average cost to the medical school for each student was $655.00 per year, while the fees paid in by the student averaged $185.00 each, per year. Naturally, the difference between the cost of education and the amount paid in tuition has to be made up by appropriations or endowment.

The requirements for admission to medical schools have been gradually increased to a point where two or more years of college work are a minimum.

For the poor but meritorious student, a number of scholarships are available in certain schools. Loan funds are also obtainable in some schools.

The general tendency of the present day is, to a great extent, specialization in medicine. The whole field of medicine and its allied branches is so great that it is obviously impossible for anyone to be professedly master of all.

In conclusion it is obvious that medical education in the United States has undergone a marvelous improvement so that the medical schools in this country are at least on a par with those of other leading nations. The greatest of all problems is how the benefits of present day knowledge of the cause, recognition, treatment and prevention of disease, can be brought within the range of the entire population, both from a standpoint of accessibility and cost. Good roads undoubtedly will play a large part in this.

J. E. C.

———o———

W. E. VEST HONORED

Walter E. Vest, member of the council and associate editor of *The Journal,* has been honored by the Southern Medical association. Dr. C. C. Bass of New Orleans, its president, has named Dr. Vest to succeed Dr. T. W. Moore as a member of its council. Dr. Vest has been active in the Southern Medical association for many years.

PROFESSOR WRITES ON MODERN MEDICAL TREND

To those who like to keep up on the trend of modern medical thought, there is an important article—the first in the magazine—in the much quoted *American Mercury*, the emporium of erudition of which H. J. Mencken is editor, and George Jean Nathan contributing editor. This discourse, on the Biology of Health, is in the December number and is by Raymond Pearl, Director of the New Institute of Biology at the Johns Hopkins, where he has been Professor of Biology since 1923. His latest work is: "The Biology of Population Growth."

It is a practical discourse of the adaptability of living things in the control of the multiplication of cells which is the basis of growth. To any one seeking a model arrangement for the transition of things scientific over to a form comprehensive to the intelligent lay mind this article is admirable. The last paragraph contains this admonition:

"The general biology of health and disease offers what I think is a sounder plan for the conduct of life which can be put this way: 'Live as a Christian Scientist is supposed to live, without thought or fear of disease. But when you feel ill consult a physician at once and follow implicitly his instructions. He knows better than any one else how to help you."

H. M. H.

———o———

ROY RAY RESIGNS POST

Dr. Roy Ray of Clendenin, Kanawha County, has tendered his resignation as head of the county's new full time health unit that is to go into operation April 1. In his letter of resignation to the county court, he informed that body that he believes it to be to his advantage to remain in private practice. Dr. Ray had understood that his salary was to be $5,000 a year. However, he recently was told by a county commissioner that it would be but $4,000. Dr. Ray indicated that this was one reason for his resignation. Commissioner O'Dell said the agreement was to pay Dr. Ray $4,000 and allow him $600 a year for expenses. The county court has not acted upon the resignation.

INTER-STATE POST GRADUATE FOREIGN CLINIC ASSEMBLIES

The 1926 foreign assemblies given under the direction of the Inter-State Post Graduate Assembly of North America will cover a territory including the chief clinic cities of Italy, Switzerland, Germany, Austria, Czecho-Slovakia, Holland and Belgium.

The physicians are going abroad as the result of invitations extended, through this association, by the leading medical universities and institutions of the countries to be visited to the medical profession of North America.

The members of the party will sail from New York April 28, a few days after the meeting of the American Medical association at Dallas. The large first-class Araguaya of the Royal Mail Steam Packet Line has been chartered to take the physicians abroad. The party will land at Cherbourg and will go at once to Paris where the clinic assemblies start.

Dr. Carl Beck of Chicago, the general secretary for the foreign assemblies, is now in Europe, completing the clinic arrangements for the assemblies.

Besides the extensive sightseeing and travel features, arrangements are being made for a ladies' entertainment committee in each of the clinic cities.

For particulars, write Dr. Wm. B. Peck, Freeport, Ill.

———o———

BIRTHS EXCEED DEATHS

Apparently the "birth control" movement has not reached Kanawha, the most populous county in West Virginia. Ask most any obstetrician to visit a neighboring city for a county society meeting and he'll say: "Can't! Got an O. B. case for that date." Reports for December issued by Dr. J. B. Lohan, city health officer, show that there were 83 more births than deaths during the Yuletide month. There were 154 births of which 61 were girls. Of the 71 deaths, 19 were caused by communicable diseases, accidents causing the majority of the remainder.

"WORDS OF PRAISE" FROM OUR MEMBERS

The publication committee desires to express its appreciation of the many letters congratulating its members on the appearance and context of the January issue of *The Journal.* There have been so many that to answer each personally would mean the equivalent of publishing a new journal. However, the committee desires to assure each member that it is the committee's object to endeavor to make *The Journal* worthwhile and to remind you that it is your Journal and your assistance and cooperation are earnestly desired.

Here are a few abstracts from the first of the congratulatory letters:

FROM A PAST PRESIDENT:

"Congratulations, gentlemen, on your first issue of the *West Virginia Medical Journal* under the new plan. From cover to cover, it is Class A."

FROM HUNTINGTONIAN:

"It has been only ten minutes since I received my new copy of *The West Virginia Medical Journal,* and I feel that already I have been too slow in complimenting you, not only on its appearance, but on its context, as well. I hardly knew the old fellow so dressed up was he, and not rolled in a little tight roll with a gray kimona as a dressing.

"I am frank to say that this is the longest any *West Virginia State Journal* has been on my desk, but this one will be read and re-read for it is a genuine pleasure to handle such nice smooth paper with big friendly type. Please distribute my congratulations to the rest of your able board and don't leave out the printer for he certainly did his part well.

"Of course, we all agree "That Clothes do not make the Man" neither does a cover make a magazine; but it does help in these days of "Dress Well and Succeed." More power to all of you and if I can ever be of any help, please do not hesitate to call on me."

AND STILL ANOTHER:

"Let me congratulate you upon your new issue of *The Journal.* It is beyond a shadow of a doubt, the best that I have ever seen and compares most favorably with any one I know of national circulation."

FROM A CONVERT:

"I hope that you will not think that I am trying to flatter you when I tell you that you should be very proud of this month's issue of *The West Virginia Medical Journal.* It would not be in good taste for me to criticize *The Journal* published in the past as I did not contribute anything to make this a better Journal. I must say, however, that this is the first publication put out by the West Virginia Medical society that the profession generally can be proud of. I have always been partial to the *Minnesota State Medical Journal.* I have subscribed to it for the past five years and have read it carefully. I have always considered it the best state medical journal in this country. Your edition this month compares favorably with it. I have heard a great many very complimentary remarks about this edition and I wish for you the success that I know you are going to have."

"WE WON'T:"

"Please accept my thanks for sending to my desk *The West Virginia Medical Journal,* dressed up in flapper dress. Here's hope that you will never send the old style again."

FROM A COUNCILOR:

"The copy of *The Journal* in its new dress and form, printed by your committee has reached my desk, and I hasten to congratulate you on its appearance and general make-up. I am delighted with it and want to assure you of my appreciation for what you are doing for *The Journal.*"

———o———

OTOLARYNGOLOGY TESTS

Examinations will be conducted by the American Board of Otolarynology in Dallas, Texas, Monday, April 19, and in San Francisco Tuesday, April 27. Application should be made immediately to Dr. H. W. Loeb, Secretary, 1402 South Grand Boulevard, St. Louis, Mo.

LORENZ BELIEVES WE DO EVERYTHING TO EXCESS

Dr. Adolph Lorenz, orthopedic surgeon, of Vienna, arriving January 7 from Southampton, said that he believed that America's great misfortune was the tendency of her people to do everything to excess. He suggested that moderate indulgence in some of the vices, among which he included alcohol, had its advantages. Dr. Lorenz said:

"One should indulge in the vices moderately. Drinking is not an evil. Alcohol is good for the stomach. It should be taken not as a beverage but as a medicine, and it should be taken in medicinal doses.

"The great misfortune of America is that Americans do everything in excess. They live in excess, work in excess and play in excess. They know nothing of alternating labor with relaxation. They would laugh at a two-hour nap a day. To keep young one should smile all the time, and it is not an easy matter to smile in my country all the time."

Dr. Lorenz explained he had come to the United States to see some former patients. —*New York Times.*

———o———

COLLEGE OF SURGEONS TO MEET IN CUMBERLAND, MD.

Announcement has been made that the American College of Surgeons will hold its district meeting in Cumberland, Maryland, Tuesday and Wednesday, March 2 and 3. The district includes West Virginia, Virginia, District of Columbia and Maryland. Dr. Chester R. Ogden of Clarksburg, is chairman of the district organization. Sessions were held in Charleston last year.

———o———

A. M. A. AUXILIARY TO MEET

The annual congress on Medical Education, Medical Licensure and Hospitals, under direction of the council on medical education and hospitals of the A. M. A., will be conducted in the Gold Room, Congress Hotel, Michigan avenue and Congress street, Chicago, on February 15, 16 and 17. Those interested should communicate with N. P. Colwell, secretary, 535 North Dearborn street, Chicago.

COMMUNICATIONS

Elkins, W. Va., Jan. 9, 1926.

Editors,
W. Va. State Medical Journal,
Charleston, W. Va.

Gentlemen: I wish to correct an error in the report of discussion of Dr. Rytina's paper on spinal anesthesia. This occurs on page 634 of December issue. I am reported as having said that I regarded spinal anesthesia as quite safe, in fact almost fool proof.

What I did say was that spinal anesthesia was sufficiently safe to justify its use, that I regarded ether as the nearest fool proof anesthetic notwithstanding the fact that I had lost two patients from its use.

Permit me to say that these two deaths were entirely due to the anesthetic and were the only two deaths I ever had from anesthesia.

Very truly yours,
A. P. BUTT.

———o———

MOVES TO VIRGINIA

Dr. Thomas A. Lamb, formerly located at Dunbar, W. Va., and a member of the Kanawha County Medical society and the state association since 1921, has located at Harrisonburg, Va., and membership transfer certificates have been issued.

———o———

DEATHS

U. H. Debendarfer

MANNINGTON—Dr. Uriah Herbert Debandarfer and Mrs. J. R. Throckmorton, of this city, were killed January 10 when the car in which they were riding was struck by a Baltimore and Ohio passenger train at the Pottery crossing in the Jericho addition to Mannington.

Dr. Debendarfer and Mrs. Throckmorton were en route to Fairmont to visit Mrs. Throckmorton's sister in a hospital there.

Dr. W. J. Leahy, of this city, who witnessed the accident, was on the opposite side of the track. Dr. Leahy stopped his car when he noticed the signal. Dr. Leahy said that when he raised up after putting on the emer-

gency brake the train was passing over the crossing and when it had passed he was unable to see the car that had been on the other side. He hurried from his car to the crossing and there saw the demolished automobile about 50 feet from the crossing.

Dr. Leahy found Mrs. Throckmorton lying between the tracks. Dr. Debendarfer had been hurled to the side. Dr. Debendarfer lived about thirty minutes.

Dr. Debendarfer for more than 25 years had resided continuously in the city of Mannington where he had been engaged during that time in the practice of medicine and surgery. He was widely known as a practitioner throughout Marion and Wetzel counties. Death came even as he was engaged in one of those many acts of tenderness and practical philanthropy that had won the love of his countless friends and the kindly respect of the entire community. The experiences of his calling, the misery and affliction that fell to his lot to treat, he administered and healed with medical skill, and soothed the despair and heartaches of his patients, with the balm of sympathy that welled from his heart as constant and unconfined as waters from a spring. The many gracious and charitable acts, the abounding spirit of love and charity that were his, will serve to keep fresh for years, the memory of this honorable and exemplary man among men.

Uriah Herbert Debendarfer was born December 5, 1868, at Brick Church, Armstrong county, Pa. He received his academic education at the Brick Church and Elderton academies. He was graduated from Thiel College at Greenville, Pa., with the master of arts degree. After completing the academic course of studies he entered upon the study of medicine. He at first placed himself under the tutelage of Dr. A. L. Slonaker, of Pittsburgh, Pa., in the year 1889. In September of the same year he entered the West Penn Medical College at the Western University of Pennsylvania, from which he was graduated March 2, 1894, with the degree of Doctor of Medicine.

Dr. Debendarfer opened an office for the practice of his profession in the city of Canton, O., in April, 1891. Later he became identified with a medical manufacturing establishment of Pennsylvania.

Then Dr. Debendarfer came to West Virginia and on September 16, 1896, he devoted himself to the practice of his profession in the town of Smithfield, in Wetzel county. After two and a half years of service to that community he removed to Mannington.

On September 7, 1898, he was united in marriage with Minerva C. Kipple. To them were born three children: Elizabeth, who died in infancy; Madge Virginia and Harold Kepple. During the more than a quarter of century the family has lived in this city, the home has been widely known for its hospitality and as a source of relief for the needy.

For several years prior to his death Dr. Debendarfer had been a member of the Methodist Episcopal church of Mannington.

Dr. Debendarfer was active not only professionally during his long residence in Mannington, but in the business world. He was instrumental in the organization of the West Virginia Boiler and Machine Works, a corporation, which enterprise he served for several years as secretary. This establishment was in turn a contributing agency to the development of the oil and gas industry for which this community was for many years nationally famous.

In 1902 he figured largely in the organization of the Mannington Real Estate Company, a corporation, which, directed largely by his energies, constructed the commodious business block which bears his name.

Dr. Debendarfer is survived by his wife, Minerva, his two children, Miss Madge Virginia and Harold Kepple, all of whom reside in this city, and his only sister, Mrs. Margaret Sober, of Tarentum, Pa.

Dr. Debendarfer was a man of fraternal inclination. During his long residence in this city he was a loyal member of Mannington Lodge No. 31, Ancient, Free and Accepted Masons, being a past master of that order. He later became a member of Chapter No. 9, Royal Arch Masons, of Fairmont, W. Va., and also a member of the Crusade Commandery No. 6, K. T. of the same city, in both of which branches of the Masonic fraternity he enjoyed a long membership and to each of which he was greatly devoted.

He was made a member of the Consistory of the Thirty-second Degree, at Wheeling, W. Va., where he also became a member of the Temple of the Mystic Shrine.

The doctor was ever busy in the field of Masonry and well merited and deserved the friendship and respect of his Masonic brothers. He sponsored the organization and development of the Ladies Oriental Shrine of West Virginia, now a large and flourishing organization, and on the pages of the history of the same his efforts and merits will long be recorded.

He was a grand patron of the Grand Chapter of the Order of the Eastern Star of West Virginia and has been long and favorably known in the grand lodges of Free Masonry and Eastern Star.

Ever remembering in whom so long ago he placed his trust, we, who so well knew him in life, now, that the great Saint "which grew from out the boundless deep turns again home," with heart sympathy for his loved ones, confidently resign him to his Divine Creator.

Funeral services were conducted at the residence January 13. The Rev. J. B. Workman, pastor of the Methodist Episcopal church, officiated, assisted by the Rev. Robert S. Jones, pastor of the First Presbyterian church.

Dr. Debendarfer was an active member of the state association for many years, records showing his membership prior to 1908.

J. E. Roles

UNION, W. Va. — Sincere sorrow has been inspired at Union and throughout Monroe county by the death of Dr. James E. Roles, which occurred December 10, 1925, at 9:30 o'clock at Stuart Circle Hospital, Richmond, Va. Dr. Roles had been ill for several months but not seriously until about a month ago and he then went to Hampton, Va., for a rest which he hoped would in a measure, restore his health. The expected improvement did not come and after a short stay he returned to Union and thence to Dr. Love's hospital in Ronceverte where it was discovered that he was afflicted with inward goiter. For some time there was little change and on December 5 he was taken to the hospital in Richmond. Here other complications set in and he continued to weaken gradually until on Thursday morning he fell asleep and his spirit passed out of the world.

Dr. Roles was 51 years last July. He was born at Lillydale, this county, on July 26, 1874 and was the son of the late Hansberry Roles and Elizabeth Baker Roles. In that community he grew up to manhood. Choosing the profession of medicine, he was educated for that career at the Medical College of Virginia at Richmond, under Dr. George Ben Johnson. After his graduation in 1896 he entered active practice at Salt Sulphur Springs but shortly removed to Union. Here he gave himself without reserve to his profession. His practice grew until it covered a wide area, over a difficult field. He was very successful, a man of ability, and he won the high esteem and confidence of the public, No one ever worked harder—always answering calls at any hour, and in hundreds of homes in this county he will be gratefully remembered as the healer of sickness and pain, the reviver of life and hope—the good physician and friend. He gathered unto himself the only riches we can take with us when we enter the new life—the treasures of service, and he goes to his reward full-handed. He was ever interested in the welfare of the community in which he lived and gave freely of his time and means to this end. He served on the Board of Education for several years, was president of the Board of Health for eight years until the time of his death and during the World War was chairman of the local draft board of examiners. He was a member of the local lodges of Masons and Modern Woodmen. Dr. Roles was a member of the M. E. Church, South.

In 1897 Dr. Roles married Miss Emma Bell Hill, daughter of Mr. and Mrs. G. W. Hill, then of St. Albans, W. Va. To them were born four children, all of whom survive and are, Mr. Sequard Roles of Union, Miss Gretis at home, Miss Edith in school at Farmville, Va., and Miss Sudie at home. Besides his wife he is also survived by one brother, Mr. E. E. Roles of Lillydale and one grandson, James Hamilton Roles, small son of Mr. and Mrs. Sequard Roles.

MEMBERSHIP ROLE COMPILED FOR PAST YEAR SHOWS HEALTHY CONDITION—GOAL OF 1500 SET FOR 1926

Kanawha County Leads State in Reports for New Year with 42 Returned in Week of January 9—Greenbrier Valley and Grant-Hampshire-Hardy-Mineral Again Among First.

The state association has just rounded out one of its most progressive years. With permanent state offices handling all of the association's routine business and directing the business management of *The Journal*, and incidentally clearing automotive insurance for members who wish to avail themselves of the saving of 25 to 30 per cent, the scope of the organization's activities has been broadened and the whole founded on the bed rock proposition of Service to Members.

Not the least of the association's activities is that of organization; in other words, memberships. A re-check of the books since the January issue was published shows a total of 1,004 members in good standing during the year. The preliminary report showed 1,008 but this figure was taken from the cumulative numbers on membership certifitary of the Monongalia County society, has tificates were made worthless through errors cates and the re-check showed that four cer- and destroyed.

At the Bluefield meeting, the secretary's report showed 912 members in good standing as of June 5. Since that time 37 members were reported August 31 and 55 on January 1 of this year, for the total of 1,004. The number reported in 1924 was 1,064. Thus, despite the increase in dues there was a net loss of but 60 members.

Early reports from secretaries indicate that all previous membership records will be broken. Kanawha county leads in numbers, Secretary Maxfield Barber having reported 42 who had paid up during the week of January 9. Next comes Secretary C. G. Willis of the Cabell County society, with 17; Secretary Vernon L. Dyer of the Grant-Hampshire-Hardy-Mineral society, and Secretary D. G. Preston of the Greenbrier Valley society are tied for third place with eight each; Dr. Eldon B. Tucker, retiring secretary of the Mercer County society. (These figures are as of January 15.) reported one as has Dr. H. G. Steele, secre-

While here listed last, yet Dr. Steele was the first secretary to report a member's 1926 dues. His society had its annual meeting January 14 and a healthy membership report likely will be in the secretary's office by the time this number is off the press.

Of considerable interest is the fact that included in the reports thus far made, there are several new members. Virtually all of the societies have membership applications pending and it is hoped that the organization will be extended into every county in the state within the next twelve months.

The association has no members in Mason, Braxton and one or two other counties. An effort is to be made to perfect organizations in these or have them affiliate themselves with the nearest society.

One of the outstanding features of the fall months has been the increased interest in county society activities. Several counties have adopted the post-graduate plan by bringing prominent physicians and surgeons to deliver the principal papers. Some of the smaller societies are working on a plan for interchange of meetings. Not a few are going to stress periodical examinations of the apparently healthy and they are to invite specialists to give post-graduate courses in the latest and most approved methods of making thorough examinations.

In connection with the fifty-ninth annual meeting at Morgantown May 25, 26 and 27, a conference of county secretaries will be conducted at which officers of the state association will be invited to "sit in" and give advice. This conference likely will be held at noon the first or second day and the fundamental object is to bring the executive

secretary's office closer to the county secretaries.

Views on organization, program and society activities will be featured. Points of contact will be stressed and it is expected that a definite program for the benefit of the whole association will be the result.

Getting back to the membership situation, it was decided at the organization meeting of the publication committee in Huntington in November that the association's membership list be published in the February issue.

The executive secretary's office will appreciate it very much if members will promptly report any errors in initials, names and addresses. Also, the secretary's office is without the street addresses of many members in the larger cities. This lack of information often may have been the cause for delay in delivery of *The Journal.*

An effort is being made to correct the records at state headquarters so that they will stand for all time and this can be done with the cooperation of the whole membership.

The membership list for 1925 follows:

MEMBERS

Barbour-Randolph-Tucker Medical Society

H. M. Boocks, Thomas.
H. H. Bolton, Pierce.
Perry Bosworth, Huttonsville.
J. L. Bosworth, Mill Creek.
A. S. Bosworth, Elkins.
R. E. Bryan, Buckhannon.
A. P. Butt, Elkins.
T. B. Crittenden, Dodson, Md.
R. W. Dunham, Elkins.
W. R. Dove, Harman.
S. D. Few, Parsons.
A. M. Fredlock, Elkins.
Ben I. Golden, Elkins.
W. W. Golden, Elkins.
C. A. Groomes, Davis.
C. H. Hall, Elkins.
E. M. Hamilton, Belington.
F. S. Holsberry, Parsons.
W. G. Harper, Beverly.
J. C. Irons, Dartmoor.
E. R. McIntosh, Elkins.
W. S. Magill, Morgantown.
Guy H. Michael, Norton.
W. S. Michael, Norton.
J. L. Miller, Thomas.
S. G. Moore, Elkins.
C. L. Moore, Upper Tract.
H. K. Owens, Elkins.
O. L. Perry, Elkins.
C. L. Rohrbaugh, Belington.
W. Scott Smith, Philippi.
C. G. Stroud, Berryburg.
J. M. Teter, Petersburg.
E. H. Updike, Mill Creek.
C. B. Williams, Philippi.
T. M. Wilson, Elkins.
A. G. Woodford, Belington.

HONORARY MEMBER

J. W. Bosworth, Philippi.

DELINQUENTS

J. L. Cunningham, Pickens.
P. L. Gray, Elkins.
B. L. Liggett, Mill Creek.
F. K. Lyons, Parsons.
W. W. Kerr, Volga.
E. F. Moore, Davis.
G. L. Pierce, Elkins.
L. W Talbott, Elkins

MEMBERS

Brooke County Medical Society

J. R. Arnold, Follansbee.
L. J. Bernstein, Wellsburg.
W. T. Booher, Bethany.
R. L. Focer, Colliers.
B. F. Harden, Wellsburg.
J. P. McMullen, Wellsburg.
J. S. McCullough, Follansbee.
F. L. Matson, Hundred.
H. A. Nolte, Beech Bottom.
J. C. Schultz, Wellsburg.

MEMBERS

Cabell County Medical Society

Asa W. Adkins, Wolf Pit, Ky.
W. F. Beckner, Huntington.
C. M. Buckner, Huntington.
B. F. Bruns, Ceredo.
B. F. Brown, Huntington.
H. A. Brandebury, Huntington.
F. E. Brammer, Huntington.
R. M. Bobbitt, Huntington.
J. R. Bloss, Huntington.
Oscar B. Biern, Huntington.
D. J. Cronin, Huntington.
W. H. Deer, Huntington.
J. W. Ferguson, Huntington.
S. I. Ferguson, Holden.
F. F. Farnsworth, Milton.
C. P. S. Ford, Huntington.
J. C. Ford, Huntington.
B. D. Garrett, Kenova.
L. V. Guthrie, Huntington.
J. A. Guthrie, Huntington.
E. B. Gerlach, Huntington.
A. P. Gibson, Huntington.
R. Hardwick, Huntington.
G. L. Howard, Huntington.
Frederick J. Hoitash, Huntington.
F. C. Hodges, Huntington .
O. T. Hines, Huntington.
I. C. Hicks, Huntington.
I. C. Hirschman, Huntington.
W. D. Hereford, Huntington.
C. M. Hawes, Huntington.
H. D. Hatfield, Huntington.
W. Byrd Hunter, Huntington.
B. L. Hume, Huntington.
J. E. Hubbard, Huntington.
G. D. Johnson,. Huntington.
A. M. Kelley, Huntington.
J. R. Keesee, Huntington.
J. C. Kessler, Huntington.
N. W. Keiser, Huntington.
J. S. Klump, Huntington.
W. C. Kappes, Huntington.
A. K. Kessler, Huntington.
A. D. Kessler, Huntington.
Arthur S. Jones, Huntington.
C. A. Latham, Huntington.
Geo. M. Lyons, Huntington.
H. V. Lusher, Crown City, Ohio.
W. M. Lewis, Huntington.
A. R. MacKenzie, Huntington.
J. C. Mathews, Huntington.
H. C. Malcolm, Huntington.
L. C. Morrison, Milton.
T. W. Moore, Huntington.
M. B. Moore, Huntington.
E. N. Miller, Huntington.
I. W. Mayberry, Huntington.

H. B. Martin, Huntington.
F. O. Marple, Huntington.
W. E. Neal, Huntington.
A. J. Pickering, Huntington.
K. C. Prichard, Huntington.
J. W. Rife, Kenova.
Rudolph Ruedemann, Jr., Huntington.
W. N. Rowley, Huntington.
J. E. Rader, Huntington.
E. E. Rose, Huntington.
R. M. Sloan, Huntington.
W. R. Spencer, Barboursville.
W. W. Strange, Huntington.
R. V. Shirley, Kenova.
W. D. Stewart, Huntington.
J. H. Steenbergen, Huntington.
P. H. Swann, Huntington.
W. C. Swann, Huntington.
C. T. Taylor, Huntington.
I. W. Taylor, Huntington.
W. C. Thomas, Huntington.
Walter E. Vest, Huntington.
R. E. Vickers, Huntington.
L. T. Vinson, Huntington.
S. P. Walker, Huntington.
C. W. Warnock, Huntington.
A. J. Watts, Huntington.
C. G. Willis, Huntington.
R. J. Wilkinson, Huntington.
R. M. Wylie, Huntington.
A. Bromley York, Huntington.

HONORARY MEMBER

E. S. Buffington, Huntington.

DELINQUENTS

F. A. Fitch, Huntington.
T. N. Goff, Kenova.
W. C. McGuire, Huntington.
I. R. LeSage, Huntington.
Roscoe Stotts, Kenova.
E. D. Wells, Huntington.
Guy Yost, Huntington.

MEMBERS

Doddridge County Medical Society

H. E. Hutson, Smithton.
A. M. McGovern, West Union.
A. Poole, West Union.
C. L. Pearcy, New Milton.
E. T. Wetzel, West Union.

DELINQUENTS

Homer Freeman, Center Point.
E. J. McGovern, West Union.
W. E. Whiteside, West Union.

MEMBERS

Eastern Panhandle Medical Society

A. O. Albin, Charles Town.
W. H. Crum, Martinsburg.
J. A. Duff, Martinsburg.
A. B. Eagle, Martinsburg.
Florence B. Evers, Martinsburg.
D. P. Fry, Hedgesville.
James K. Guthrie, Martinsburg.
Victor Glover, Martinsburg.
B. F. Haines, Charles Town.
W. T. Henshaw, Martinsburg (Charleston).
C. C. Johnson, Bolivar.
J. M. Miller, Charles Town.
J. W. McSherry, Martinsburg.
G. P. Morrison, Martinsburg.
T. K. Oates, Martinsburg.
Howard Osburn, Rippon.
M. H. Porterfield, Martinsburg.
F. M. Phillips, Charles Town.
B. B. Ranson, Harpers Ferry.
Clifford Sperow, Martinsburg.
G. J. E. Sponceller, Martinsburg.
W. A. Wallace, Martinsburg.

DELINQUENTS

Horace M. Banks, Shepherdstown.
E. H. Bitner, Martinsburg.
W. W. Brown, Rippon.
S. T. Knott, Shepherdstown.
John L. Myers, Shepherdstown.
James H. Oliver, Martinsburg.
A. J. LeMaster, Martinsburg.
E. H. Willard, Great Cacapon.

MEMBERS

Fayette County Medical Society

Templeton Adair, Mt. Hope.
Arthur E. Bays, Boomer.
B. F. Baugh, Montgomery.
J. C. Brown, Nallen.
C. M. Brown, Mt. Hope.
F. W. Bilger, Maybeury.
G. F. Crank, Lawton.
S. R. Fairchild, Elkridge.
Claude Frazier, Powelton.
H. L. Goodman, McKendree.
Ed. J. Grose, Fayetteville.
J. E. Hamner, Quinwood.
J. R. Harless, Glen Ferris.
W. N. Haynes, Victor.
J. W. Hopkins, Fayetteville.
Ralph Hogshead, Carbondale.
Gory Hogg, Harvey.
J. E. Hughart, Landisburg.
O. J. Henderson, Montgomery.
G. G. Hodges, Kilsythe.
E. E. Jones, Mt. Hope.
W. R. Laird, Montgomery.
R. L. Lee, Harvey.
W. P. McIntosh, Longacre.
H. C. Martin, Honey Dew.
M. A. Moore, Kingston.
A. L. Morris, Jodie.
S. W. Price, Scarbro.
A. F. Saunders, Meadow Bridge.
J. S. Shaffer, Montgomery.
D. W. Shirkey, Montgomery.
H. C. Skaggs, Montgomery.
G. S. Skaggs, Beards Fork.
W. E. Smith, Minden.
G. S. Smith, Page.
J. F. Van Pelt, Oak Hill.
J. W. Walker, Winona.
H. A. Walkup, Mt. Hope.

DELINQUENTS

G. C. Andes, Milburn.
J. H. Bannister, Montgomery.
W. B. Barker, McDonald.
M. E. Caldwell, Montgomery.
A. W. Crews, Thurmond.
George W. Fox, Ansted.
L. O. Fox, Ansted.
F. W. Groome, Elverton.
A. L. Hunter, Pax.
C. W. Lemon, Claremont.
B. E. Lykins, Thurmond.
R. M. Mohler, Winona.
William Nelson, Montgomery.
R. L. Penn, Oak Hill.
R. S. Peck, Cannelton.
J. M. Spinks, Mt. Hope.
R. W. Stoneburner, Montgomery.
W. B. Weedin, Beards Fork.
J. B. Woodville, Lansing.

MEMBERS

Grant-Hardy-Hampshire-Mineral Medical Society.

J. B. Abbott, Piedmont.
O. V. Brooks, Moorefield.
F. L. Baker, Burlington.
W. M. Babb, Keyser.
H. F. Coffman, Keyser.
R. W. Dailey, Jr., Romney.
W. G. Drinkwater, Gormania.
V. L. Dyer, Petersburg.
Geo. S. Gochenour, Moorefield.
J. B. Grove, Petersburg.
W. T. Highberger, Maysville.
C. S. Hoffman, Keyser.
Z. T. Kalbaugh, Piedmont.
J. O. Lantz, Hartsmanville.
R. W. Love, Moorefield.
B. F. Moyers, Matthias.
J. A. Moyers, Franklin.
J. S. Offutt, Capon Bridge.
Maurice H. Maxwell, Keyser.
E. B. Martin, Romney.
Arnold A. Scherr, Keyser.
Hugh Strachan, Blaine.
E. K. Wilson, Romney.
T. L. Wilson, Piedmont.
J. H. Wolverton, Piedmont.
M. F. Wright, Burlington.

DELINQUENTS

W. H. Hannum, Levels.
J. W. Shull, Romney.

MEMBERS

Greenbrier Valley Medical Society

Julian D. Arbuckle, Lewisburg.
O. P. Argabrite, Alderson.
Bankhead Banks, White Sulphur Springs.
H. L. Beard, Lewisburg.
A. E. Burner, Durbin.
C. R. Campbell, Williamsburg.
J. W. Compton, Ronceverte.
J. W. De Vebre, Ronceverte.
H. D. Gunning, Rainelle.
U. H. Hannah, Cass.
E. G. Kessler, Sanford, Fla.
S. G. Love, Ronceverte.
W. E. Myles, White Sulphur Spgs.
S. A. McFerrin, Renick.
C. F. Mahood, Alderson.
D. G. Preston, Lewisburg.
W. H. Parker, Braeholm.
N. R. Price, Marlinton.
L. D. Rupert, Frankford.
Quintard Taylor, White Sulphur Springs.
C. I. Wall, Rainelle.
W. L. A. Wellbrock, Ronceverte.

DELINQUENTS

L. W. Blake, Ronceverte (Florida).
Geo. L. Wyatt, White Sulphur Springs.

MEMBERS

Hancock County Medical Society

Geo. H. Davis, Weirton.
F. B. Harrington, Weirton.
Charles Koenig, New Cumberland.
Geo. E. Lewis, Chester.
I. Levendorf, Weirton.
C. Moraitis, Weirton.
M. H. Powers, Weirton.
J. L. Pyle, Chester.
J. E. Richmond, Weirton.
Geo. Riggs, Weirton.
C. A. Shafer, Chester.
L. O. Schwartz, Weirton.
L. A. Whitaker, Weirton.

MEMBERS

Harrison County Medical Society

C. T. Arnett, Clarksburg.
C. S. Bates, Lumberport.
E. H. Brannon, Bridgeport.
B. S. Brake, Clarksburg.
J. T. Brennan, Clarksburg.
R. H. Cather, Wyatt.
S. L. Cherry, Clarksburg.
C. C. Coffindaffer, Clarksburg.
I. D. Cole, Clarksburg.
J. E. Corbin, Clarksburg.
D. P. Cruikshank, Lumberport.
Louise J. Currence, Clarksburg.
Edw. Davis, Salem.
W. M. Davis, Bridgeport.
C. R. DeForrest, Clarksburg.
W. C. DeForest, Clarksburg.
H. H. Esker, Clarksburg.
John Folk, Bridgeport.
Earl N. Flowers, Clarksburg.
E. Newton Flowers, Clarksburg.
A. O. Flowers, Clarksburg.
O. S. Gribble, Clarksburg.
L. C. Goff, Manayka.
William Gaston, Clarksburg.
Wm. T. Gocke, Clarksburg.
Alex Hannah, R. F. D., Wilsonburg.
R. A. Haynes, Clarksburg.
W. P. Hamner, Lumberport.
H. H. Haynes, Clarksburg.
E. A. Hill, Clarksburg.
R. C. Hood, Clarksburg.
Kenna Jackson, Wallace.
C. C. Jarvis, Clarksburg.
A. J. Kemper, Lost Creek.
J. W. Livesay, Mt. Clare.
R. V. Lynch, Meadowbrook.
D. C. Louchery, Clarksburg.
W. O. Ladwig, Wilsonburg.
Frank V. Langfitt, Clarksburg.
D. Leeson, Adamston.
R. B. Linger, Lost Creek.
J. S. Malloy, Shinnston.
W. A. Marsh, Adamston.
B. F. Matheny, Clarksburg.
John P. McGuire, Clarksburg.
R. J. Nutter, Clarksburg.
R. B. Nutter, Enterprise.
C. R. Ogden, Clarksburg.
R. L. Osborne, Clarksburg.
W. T. Owens, Clarksburg.
S. H. Post, Lost Creek.
Cecil O. Post, Clarksburg.
A. T. Post, Clarksburg.
J. E. Payne, Clarksburg.
Edward Payne, Clarksburg.
J. E. Page, Clarksburg.
G. E. Pao'azzi, Clarksburg.
C. R. Peck, Clarksburg.
E. Pendleton, Manayka.
R. M. Riley, Nutter Fort.
Harry A. Rosenthal, Clarksburg.
V. A. Selby, Clarksburg.
C. N. Slater, Clarksburg.
H. E. Sloan, Clarksburg.
P. C. Showalter, Clarksburg.
B. F. Shuttleworth, Clarksburg.
W. L. Strother, Salem.
E. A. Teets, Clarksburg.
W. L. Thomason, Clarksburg.
E. D. Tucker, Nutters Fort.
J. Harold Underwood, Shinnston.
E. F. Wehner, Clarksburg.
H. Allen Whisler, Clarksburg.
J. F. Williams, Clarksburg.
C. A. Willis, Charleston.
E. A. Wilson, Salem.
J. E. Wilson, Clarksburg.
J. B. Winfield, Clarksburg.
Eugene B. Wright, Clarksburg.

HONORARY MEMBER

T. M. Hood, Clarksburg.

DELINQUENTS

L. C. Oyster, Lumberport.
C. L. Bates, Smithfield.

MEMBERS

Kanawha County Medical Society

A. L. Amick, Charleston.
Maury Anderson, Morrisvale.
J. A. Arbuckle, Charleston.
O. L. Aultz, Charleston.
L. L. Aultz, Charleston.
Ernest Ball, Charleston.
T. Maxfield Barber, Charleston.
W. L. Barbour, Putney.
G. H. Barksdale, Charleston.
O. H. Bobbitt, Charleston.
Andrew S. Boggs, Charleston.
W. P. Black, Charleston.
R. K. Buford, Charleston.
I. P. Champe, Charleston.
E. H. Campbell, Carbon.
L. M. Campbell, Eskdale.
J. E. Cannaday, Charleston.
G. B. Capito, Charleston.
H. L. Carter, Danville.
T. J. Casto, Charleston.
V. T. Churchman, Charleston.
C. E. Copeland, Charleston.
Edwin A. Davis, Charleston.
J. W. Duff, Charleston.
R. H. Dunn, South Charleston.
J. L. Dunlap, Bancroft.
M. L. Dillon, Charleston.
G. B. Fisher, Kayford.
C. A. Fleger, Seth.
Ralph J. Ford, Charleston.
M. D. Good, Charleston.
P. L. Gordon, Charleston.
Fred Gott, Charleston.
G. F. Grissinger, Charleston.
Elizabeth Hampson, Charleston.
J. H. Hansford, Pratt.
E. R. Hatfield, Charleston.
Ward Harshbarger, St. Albans.
E. Rudyard Hays, Chelyan.
E. Bennette Henson, Charleston.
Arthur N. Henson, Hamlin.

H. H. Howell, Danville.
H. D. Hively, Charleston.
David H. Hill, Charleston.
J. Ross Hunter, Charleston.
R. A. Ireland, Charleston.
G. G. Irwin, Charleston.
L. A. Jarrett, Dunbar.
Ray Kessel, Charleston.
H. C. Kincaid, Mordue.
Thos. A. Lamb, Harrisonburg, Va.
J. B. Lohan, Charleston.
A. C. Lambert, Charleston.
Atlee Mairs, Charleston.
C. B. Marshall, Nitro.
M. I. Mendeloff, Charleston.
Geo. A. MacQueen, Charleston.
U. G. McClure, Charleston.
W. A. McMillan, Charleston.
H. D. McPherson, Sharon.
A. B. Nelson, East Bank.
J. T. Nolen, Ward.
Hugh G. Nicholson, Charleston.
R. O. O'Dell, South Charleston.
Charles O'Grady, Charleston.
H. S. Ogilvie, Charleston.
D. F. Pauley, Jeffrey.
M. F. Petersen, Charleston.
S. H. Phillips, Charleston.
Owen Poling, Nellis.
W. W. Point, Charleston.
B. S. Preston, Charleston.
R. B. Price, Charleston.
C. A. Ray, Charleston.
James Putney, Charleston.
Roy Ray, Clendenin.
Carl F. Raver, Charleston.
J. U. Rohr, Charleston.
W. B. Robertson, Quincy.
W. S. Robertson, Charleston.
H. L. Robertson, Charleston.
G. C. Robertson, Charleston.
R. D. Roller, Jr., Charleston.
A. M. Reid, Charleston.
G. A. Rigrish, Charleston.
G. C. Schoolfield, Charleston.
A. A. Shawkey, Charleston.
W. S. Shepherd, Charleston.
W. F. Shirkey, Sr., Charleston.
W. F. Shirkey, Jr., Charleston.
J. R. Shultz, Charleston.
A. A. Smith, Ivaton.
E. W. Smoot, Madison.
J. W. Skaggs, Nitro.
H. H. Staats, Charleston.
B. H. Swint, Charleston.
Hugh Thompson, Charleston.
W. A. Thornhill, Charleston.
A. C. Vandine, Charleston.
R. H. Walker, Charleston.
C. N. Watts, Van.
F. P. Weltner, Charleston.
H. P. Williams, Dorothy.
W. H. Wilson, St. Albans.
Wirt B. Wilson, Charleston.
R. E. Woodall, Charleston.
J. A. Work, Blue Creek.

HONORARY MEMBERS

Irwin C. Carlisle, Charleston.
Gilman R. Davis, Charleston.
J. M. McConihay, Charleston.
S. S. Staunton, Charleston.

DELINQUENTS

S. C. Austin, Charleston.
R. D. Black, Carbon.
R. F. Bryant, Blakeley.
C. B. Cann, Spring Hill.
A. W. DeBell, Malden.
W. V. Dunlap, Charleston.
R. A. Hamrick, Clay.
A. J. Hatfield, Madison.
Harry D. Law, Nitro.
W. F. Leech, Williamson.
C. L. Lyons, Charleston.
V. E. McEldowney, Newell.
W. L. McElwain, Charleston.
H. H. Young, Charleston.

MEMBERS

Lewis County Medical Society

G. M. Burton, Weston.
S. H. Burton, Weston.
M. D. Cure, Jr., Weston.
E. R. Cooper, Troy.
D. D. Chapman, Vadis.
Cecil D. Denham, Weston.
W. H. Green, Weston.
O. L. Hudkins, Weston.
E. P. King, Weston.
E. T. W. Hall, Weston.
D. P. Kessler, Weston.
T. F. Law, Weston.
A. F. Lawson, Weston.
G. R. Post, Weston.
J. G. Pettit, Hopemont.
E. P. Roop, Camden.
George Snyder, Weston.

DELINQUENTS

A. B. Collins, Weston.
R. H. McDannald, Horner.
Benjamin W. Peck, Burnsville.

MEMBERS

Logan County Medical Society

Z. M. Borden, Whitman.
D. M. Brickey, Manbar.
C. A. Davis, Logan.
H. H. Farley, Logan.
W. F. Farley, Holden.
W. S. Gilmer, Henlawson.
K. J. Heatherman, Omar.
Augustus Holderfield, Man.
J. O. Hill, Logan.
V. E. Holcombe, Logan.
W. F. Harless, Clothier.
J. G. Lowery, Clothier.
J. W. Lyons, Holden.
L. W. Lawson, Logan.
S. B. Lawson, Logan.
E. R. Logan, Omar.
C. A. Martin, Amherstdale.
W. T. McClellan, Ethel.
Nathan Poliakoff, Huntington.
F. L. Round, Holden.
W. S. Rowan, Logan.
L. E. Shrewsbury, Mallory.
L. E. Steel, Logan.
Mark Sutphin, Logan.
B. D. Smith, Omar.
J. H. Thornburg, Crites.
E. B. Thompson, Ethel.
W. J. Thomas, Taplin.
R. R. Vaughn, Dehue.

DELINQUENTS

J. F. May, Rossmore.
N. E. Steele, Logan.

MEMBERS

Little Kanawha and Ohio Valley Medical Society

C. W. Ailor, Parkersburg.
C. W. Albert, Parkersburg.
W. A. Adams, Parkersburg.
O. D. Barker, Parkersburg.
J. E. Barrows, Ravenswood.
R. H. Boice, Parkersburg.
Charles L. Boyers, Parkersburg.
S. Warren Bush, Parkersburg.
E. W. Crooks, Parkersburg.
W. D. Cline, Williamstown.
Orva Conley, Elizabeth.
Ira Connoly, Hanna.
Rolla Camden, Parkersburg.
R. Wiley Corbitt, Parkersburg.
D. C. Casto, Parkersburg.
H. M. Campbell, Parkersburg.
R. E. Davis, Parkersburg.
U. L. Dearman, Reedy.
E. H. Douglas, Petroleum.
Z. B. Ferrell, Parkersburg.
Mark O. Fisher, Parkersburg.
J. T. Goff, Parkersburg.
E. T. Goff, Parkersburg.
W. R. Goff, Parkersburg.
E. S. Goff, Spencer.
A. S. Grimm, St. Marys.
Wade Gaston, Parkersburg.
H. E. Gaynor, Parkersburg.
C. E. Grimm, St. Marys.
H. A. Giltner, Parkersburg.
E. C. Hartman, Parkersburg.
T. L. Harris, Parkersburg.

Geo. D. Jeffers, Parkersburg.
C. D. Kraft, Parkersburg.
R. B. Miller, Parkersburg.
E. C. Moyer, Cairo.
C. L. Muhleman, Parkersburg.
John E. McQuain, Parkersburg.
R. H. Paden, Parkersburg.
B. S. Parks, Parkersburg.
S. M. Prunty, Parkersburg.
H. D. Price, Parkersburg.
W. D. Pickering, Lone Cedar.
C. E. Park, Parkersburg.
J. G. Rogers, Parkersburg.
B. O. Robinson, Parkersburg.
L. O. Rose, Parkersburg.
W. B. Richardson, Parkersburg.
M. R. Stone, Parkersburg.
Paul C. Starkey, Ravenswood.
S. H. D. Wise, Ravenswood.

HONORARY MEMBERS

A. N. Frame, Parkersburg.
W. S. Grimm, St. Marys.

DELINQUENTS

W. T. W. Dye, Grantsville.
W. J. Judy, Vienna.
James A. Morford, Grantsville.
J. R. McCallum, St. Marys.
E. L. Wright, Parkersburg.

MEMBERS

Marion County Medical Society

J. P. Alkire, Middleton.
J. W. Ballard, Rivesville.
J. M. Barr, Middleton.
L. B. Boyers, Fairmont.
W. F. Boyers, Fairmont.
C. H. Brownfield, Fairmont.
Hugh Carr, Fairmont.
Henry D. Causey, Fairmont.
J. B. Clinton, Fairmont.
J. C. Collins, Grant Town.
T. J. Conaway, Barracksville.
W. L. Coogle, Rivesville.
H. L. Criss, Fairmont.
Carl J. Carter, Fairmont.
Dorsey P. Fitch, Fairmont.
Luther C. Davis, Fairmont.
Carter S. Fleming, Fairmont.
F. E. Flowers, R. F. D. No. 6., Mannington.
M. F. Hamilton, Mannington.
C. O. Henry, Fairmont.
O. L. Holland, Fairmont.
L. D. Howard, Fairmont.
E. W. Howard, Fairmont.
L. H. Horton, Davy.
J. J. Jenkins, Farmington.
H. R. Johnson, Fairmont.
C. L. Kinney, Ida May.
H. S. Keister, Fairmont.
J. A. Jamison, Fairmont.
W. J. Leahy, Mannington.
P. F. Prioleau, Fairmont.
W. W. Orr, Mannington.
C. L. Parks, Fairmont.
A. L. Peters, Fairmont.
J. E. Offner, Fairmont.
Etlore Pitassey, Fairmont.
Phoebia G. Moore, Mannington.
G. V. Morgan, Fairmont.
T. H. Miller, Fairmont.
George R. Miller, Fairview.
L. D. Norris, Fairview.
J. A. Riedy, Monongah.
C. M. Ramage, Fairmont.
A. J. St. Lawrence, Fairmont.
L. S. Smith, Monongah.
E. P. Smith, Fairmont.
A. W. Smith, Farmington.
E. F. Sheppard, Fairmont.
E. W. Strickler, Fairmont.
K. Y. Swisher, Fairview.
G. H. Traugh, Fairmont.
J. M. Trach, Fairmont.
J. R. Tuckwiller, Fairmont.
F. W. Vance, Mannington.
Charles W. Waddell, Fairmont.
L. N. Yost, Fairmont.
Joe Yost, Fairmont.
H. R. Yost, Fairmont.

HONORARY MEMBER

Thomas M. Calvert, Mannington.

MEMBERS

Marshall County Medical Society

J. E. Arnold, Cameron.
R. A. Ashworth, Moundsville.
B. F. Bone, Moundsville.
W. P. Bonar, Moundsville.
P. D. Barlow, McMechen.
A. L. Coffield, Proctor .
A. Filmore Compton, Moundsville.
J. E. Cooper, Cameron.
O. F. Covert, Moundsville.
J. J. Duffey, Moundsville.
D. B. Ealy, Moundsville.
C. S. Fortney, Hundred.
Mary J. Fortney, Hundred.
Wm. G. C. Hill, Cameron.
W. B. Hartwig, Benwood.
C. M. Kimble, Paden City.
J. C. Peck, Moundsville.
E. T. Lake, Sulphur Springs, Fla.
John B. Luikart, Moundsville.
Chas. G. Morgan, Moundsville.
L. H. McCuskey, Moundsville.
E. E. Martin, New Martinsville.
J. M. Neidermeyer, Benwood.
J. A. Porter, Silver Hill.
A. B. Rinehart, McMechen.
C. W. Riggs, Cameron.
J. W. Ruckman, West Liberty.
J. A. Striebich, Moundsville.
J. O. Theiss, New Martinsville.
O. P. Wilson, Moundsville.
H. C. Whisler, Smithfield.
S. F. Yoho, Captina.

HONORARY MEMBERS

M. A. Dowler, Glendale.
J. W. Rickey, Moundsville.

DELINQUENTS

G. W. Anderson, Littleton.
W. F. Crow, Glen Easton.
Harriet B. Jones, Glendale.
E. W. Rose, Hundred.

MEMBERS

Mercer County Medical Society

C. C. Ballard, Gap Mills.
J. W. Bird, Rock.
B. W. Bird, Princeton.
J. O. Bailiff, Mullens.
J. G. Bishop, Bluefield.
J. F. Blaydes, Bluefield.
J. R. Boyd, Oakvale.
M. B. Caldwell, Matoaka.
J. H. Craft, Springton.
F. J. Collison, Bluefield.
B. S. Clements, Matoaka.
W. B. Davis, Princeton.
William D. Fitzhugh, McComas.
P. R. Fox, Bramwell.
J. Francke Fox, Bluefield.
H. H. Haggart, Bluefield.
H. C. Hayes, Princeton.
S. R. Holroyd, Athens.
F. F. Holroyd, Glen Rogers.
E. W. Horton, Bluefield.
A. H. Hoge, Bluefield.
W. W. Harloe, Matoaka.
O. S. Hare, Bluefield.
S. J. Kell, Bluefield.
J. B. Kirk, Bluefield.
David Littlejohn, Charleston.
H. B. Luttrell, Bramwell.
M. N. Mastin, Goodwill.
Percy J. NcElrath, Bramwell.
John McGuire, Bluefield.
W. Ross Morris, Alpoca.
Thos. E. Peery, Bluefield.
H. A. Porter, Itman.
F. S. Richmond, Bluefield.
R. O. Rogers, Bluefield.
C. J. Reynolds, Bluefield.
Francis T. Ridley, Bluefield.
W. W. Rixie, Princeton.
G. G. Rhudy, Bluefield.
M. W. Sinclair, Bluefield.
C. M. Scott, Bluefield.
C. T. St. Clair, Bluefield.

W. H. St. Clair, Bluefield.
B. W. Steele, Mullens.
H. G. Steele, Bluefield.
W. C. Slusher, Bluefield.
Ira M. Smith, Princeton.
Carl W. Smith, Princeton.
F. X. Schuller, Huntington.
G. T. Thornhill, Bluefield.
G. L. Todd, Princeton.
T. E. Vass, Bluefield.
J. R. Vermillion, Princeton.
Uriah Vermillion, Athens.
W. H. Wallingford, Princeton.
A. D. Wood, Bluefield.

HONORARY MEMBER

A. H. Carr, New Hope.

DELINQUENTS

W. I. Gautier, Athens.
L. C. McNeer, Dante, Va.
E. M. Tanner, Bluefield.

MEMBERS

McDowell County Medical Society

J. H. Anderson, Marytown.
W. P. Bean, Keystone.
R. K. Bragonier, Keystone.
G. W. Brewster, Roderfield.
H. G. Camper, Welch.
L. H. Clark, Kyle.
W. E. Cook, Pageton.
H. R. Cornell, Elkhorn.
N. F. Coulton, Gary.
L. E. Cox, Mohawk.
S. A. Daniel, Welch.
J. E. Davis, Welch.
H. P. Evans, Eckman.
G. P. Evans, Iaeger.
J. W. English, McDowell.
W. F. Forgeson, Premier.
D. D. Hatfield, Yukon.
W. C. Hall, Welch.
Chas. T. Hicks, Welch.
Alex Irvine, McDowell.
W. L. Johnston, McDowell.
J. C. Kelley, Vivian.
H. L. Kirkpatrick, Deegans.
B. H. Lovely, Welch.
J. Louis McCarty, Berwind.
T. G. Matney, Mohawk.
R. C. Mitchell, Gary.
W. L. Peck, Coalwood.
E. F. Peters, Princeton.
I. F. Peters, Maybeury.
A. G. Rutherford, Welch.
J. L. Sameth, Welch.
R. V. Shanklin, Gary.
H. T. Shifelbein, Eckman.
W. B. Stevens, Eckman.
E. N. Shockley, Carreta.
G. L. Straub, Welch.
J. E. Taylor, Panther.
E. E. Vermillion, Welch.
C. W. Vick, Jenkin Jones.
A. A. Wilson, Switchback.
Victor L. Whetherby, Welch.
Y. Branch Young, Elkhorn.
C. R. Woolvine, Davy.

HONORARY MEMBER

P. H. Killey, Vivian.

DELINQUENTS

C. C. Cochrane, Kimball.
C. R. Hughes, Kimball.
F. A. Lawton, Thacker.
C. E. Stump, Bluefield.
K. C. Thomas, Miami, Fla.
H. L. Tutwiler, Iaeger.
L. L. Whitney, Elbert.
W. C. Williams, Welch.

MEMBERS

Mingo County Medical Society

L. F. Boland, Williamson.
W. H. Burgess, Williamson.
Carl B. Campbell, Matewan.
H. M. Coleman, Matewan.
G. T. Conley, Williamson.
Jay R. Crawley, Gilbert.
W. A. Dotson, Vulcan.
O. P. Hodge, Matewan.
G. B. Irvine, Williamson.
B. W. Kendall, War Eagle.
O. H. Jennings, Williamson.
J. C. Lawson, Borderland.
Frank Mosley, Williamson.
Rufus M. Musick, Delbarton.
C. E. Peery, Glenalum.
W. H. Price, Chattaroy.
Fred Ben Quincy, Aflex, Ky.
B. J. Read, Red Jacket.
R. A. Salton, Williamson.
U. O. Sanders, Lobato.
E. C. Shull, Williamson.
W. A. Simpson, Williamson.
Thos. Slayden, Williamson.
Henry Clay Smith, Williamson.
E. P. Stepp, Kermit.
James H. Turner, D'Hanis, Texas.
W. S. Williams, Lobato.

DELINQUENTS

Rush F. Farley, Burch.
J. B. Millard, Williamson.
Alvah Ramsey, Williamson.
George W. Smith, Matewan.

MEMBERS

Monongalia County Medical Society

A. Arkin, Chicago, Ill.
M. L. Bonar, Morgantown.
W. B. Borror, Morgantown.
C. F. Boyers, Morgantown.
C. M. Bray, Morgantown.
M. H. Brown, Morgantown.
C. M. Clelland, Evertsville.
L. W. Cobun, Morgantown.
Forrest P. Coombs, Morgantown.
R. H. Edmundson, Morgantown.
R. W. Fisher, Morgantown.
Irvin Hardy, Morgantown.
E. F. Heiskell, Morgantown.
David Hott, Morgantown.
W. H. Howell, Morgantown.
J. R. Hughart, Morgantown.
Clifford B. John, Morgantown.
W. C. Kelly, Morgantown.
Herbert V. King, Morgantown.
C. Royall Kessell, Morgantown.
J. P. Lilly, Morgantown.
C. H. Maxwell, Morgantown.
G. R. Maxwell, Morgantown.
S. J. Morris, Morgantown.
W. C. Moser, Morgantown.
Cosimo Menzolora, Morgantown.
T. Jud McBee, Morgantown.
D. M. Pfost, Morgantown.
R. C. Price, Morgantown.
H. C. Powell, Morgantown.
Geo. W. Phillips, Morgantown.
F. T. Scanlon, Morgantown.
Frank H. Sisler, Morgantown.
J. N. Simpson, Morgantown.
B. M. Stout, Morgantown.
William Adams Smith, Morgantown.
A. E. Smith, Morgantown.
C. W. Spears, Minneapolis, Minn.
William B. Scherr, Morgantown.
Samuel F. Talbott, R. F. D. No. 3, Morgantown.
Alfred Taylor, Mona.
E. R. Taylor, Morgantown.
Eldon B. Tucker, Morgantown.
S. S. Wade, Morgantown.
C. B. Wylie, Morgantown.

HONORARY MEMBER

W. C. Kelly, Morgantown.

MEMBERS

Ohio County Medical Society

G. W. Abersold, Wheeling.
D. M. Aikmann, Wheeling.
E. L. Ambrecht, Wheeling.
D. B. Best, Wheeling.
E. S. Bippus, Wheeling.
H. W. Bond, Wheeling.
W. A. Cracraft, Wheeling.
A. L. Coyle, Wheeling.
H. B. Copeland, Wheeling.
J. Plumer Cole, Wheeling.
C. H. Clovis, Wheeling.
E. E. Clovis, Wheeling.

W. U. Charlton, Wheeling.
J. E. Caldwell, Wheeling.
J. T. Carter, Triadelphia.
J. A. Campbell, Wheeling.
H. P. Campbell, Wheeling.
J. L. Dickey, Wheeling.
R. U. Drinkard, Wheeling.
W. M. Dalbey, Wheeling.
H. N. Deem, Wheeling.
Thos. F. Downing, Wheeling.
J. Leonard Eskey, Wheeling.
W. C. Etzler, Wheeling.
A. C. Earnest, Wheeling.
Ivan Fawcett, Wheeling.
W. S. Fulton, Wheeling.
J. W. Gilmore, Wheeling.
Earl F. Glass, Wheeling.
A. J. Goodwin, Wheeling.
O. H. Griffith, Wheeling.
M. Gaydosh, Wheeling.
N. A. Haning, Wheeling.
E. F. Harden, Wheeling.
L. N. Harris, Wheeling.
A. J. Harness, Wheeling.
H. M. Hall, Wheeling.
H. A. Henderson, Fulton.
Elizabeth Hupp, Wheeling.
Frank LeMoyne Hupp, Wheeling.
J. C. Hupp, Wheeling.
A. W. Higgins, Wheeling.
Arthur K. Hoge, Wheeling.
J. O. Howell, Bridgeport, Ohio.
Harry Hubbard, Tiltonville, O.
E. Lloyd Jones, Wheeling.
A. L. Jones, Bridgeport, Ohio.
E. L. Kaufmann, Wheeling.
M. B. Kelly, Wheeling.
Charles H. Keesor, Wheeling.
Elizabeth Keay, Wheeling.
T. M. Klug, Wheeling.
J. E. Marschner, Wheeling.
D. A. MacGregor, Wheeling.
W. S. McClure, Wheeling.
John H. McCall, Wheeling.
O. D. McCoy, Wheeling.
A. V. McCoy, Triadelphia.
W. H. McLain, Wheeling.
R. M. McMillan, Wheeling.
Mary B. Monroe, Wheeling.
W. T. Morris, Wheeling.
B. D. Morrison, Wheeling.
Albert E. Nolte, Wheeling.
Harry F. Nolte, Beech Bottom.
A. J. Noome, Wheeling.
H. E. Oesterling, Wheeling.
J. J. Osburn, Wheeling.
R. M. Peddicord, Elm Grove.
E. M. Phillips, Wheeling.
Howard T. Phillips, Wheeling.
E. B. Plant, Wheeling.
W. A. Quinby, Wheeling.
J. O. Rankin, Wheeling.
R. J. Reed, Wheeling.
F. E. Roberts, Wheeling.
A. F. Ruble, Elm Grove.
W. P. Sammons, Warwood.
W. M. Sheppe, Wheeling.
T. K. Shields, Elm Grove.
R. J. Snider, Wheeling.
Harry Silver, Wheeling.
O. M. Statts, Wheeling.
J. G. Thoner, Wheeling.
J. T. Thornton, Wheeling.
R. A. Tomassene, Wheeling.
S. W. Tretheway, Wheeling.
C. M. Truschel, Wheeling.
G. L. Vieweg, Wheeling.
Max Vieweg, Wheeling.
J. G. Walden, Wheeling.
W. S. Webb, Warwood.
H. S. West, Wheeling.
M. B. Williams, Wheeling.
C. A. Wingerter, Wheeling.
Michael S. Zervos, Wheeling.
Mathew C. Zubok, Wheeling.

HONORARY MEMBERS

Gregory G. Ackerman, Wheeling.
A. B. Barnett, Wheeling.
H. P. Linsz, Wheeling.
J. Schwinn, Wheeling.

DELINQUENTS

Mabel Clovis, Wheeling.
J. M. Houston, Wheeling.
D. E. Morgan, Wheeling.
Andrew Wilson, Wheeling.
C. W. Ulfert, Wheeling.

MEMBERS

Preston County Medical Society

W. F. Dailey, Terra Alta.
R. D. Harman, Kingwood.
H. N. Moser, Terra Alta.
Harold Miller, Eglon.
W. A. Nelton, Terra Alta.
A. N. Osburn, Frum.
B. S. Rankin, Tunnelton.
D. J. Rudasill, Kingwood.
John Thames, Kingwood.
E. E. Watson, Albright.
C. S. White, Newburg.
Earnest Wichterman, Masontown.

DELINQUENTS

F. D. Fortney, Newburg.
Lewis H. Howard, Tucson, Ariz.
W. H. Post, Masontown.

MEMBERS

Raleigh County Medical Society

McRae C. Banks, Raleigh.
A. G. Bowles, Glen White.
J. A. Campbell, Beckley.
W. H. Cunningham, Blue Jay.
W. C. Covey, Winding Gulf.
J. E. Coleman, Beckley.
U. G. Cook, Beckley.
D. D. Daniel, Eccles.
Ross P. Daniel, Pemberton.
G. P. Daniel, Glen Daniel.
E. S. Dupuy, Beckley.
Byron W. Eakin, Tams.
J. F. Easton, Clear Creek.
Ira M. Fisher, Stotesbury.
George Fordham, Wyco.
A. H. Grigg, Beckley.
T. F. Garrett, Sprague.
John L. Haddox, Montcoal.
O. L. Hamilton, Vanwood.
Dennis L. Hill, Wickham.
R. L. Hunter, Jarrolds Valley.
E. H. Hedrick, Beckley.
W. W. Hume, Beckley.
G. W. Johnson, McAlpin.
D. B. Jarrell, Beckley.
Kyle M. Jarrell, Beckley.
O. B. Lynch, Beckley.
F. J. Moore, Affinity.
W. G. Moran, Jr., Fireco.
J. H. McCullough, Beckley.
J. E. McKenzie, Beckley.
B. L. Pettry, Dorothy.
B. B. Richmond, Cranberry.
A. R. Scott, East Gulf.
C. S. Smith, Beckley.
J. H. Smith, Edwight.
Walter D. Simmons, Slab Fork.
Fred Stansbury, Beckley.
A. U. Tieche, Beckley.
B. B. Wheeler, Beckley.
J. H. Wilson, Hamlet.
Robt. P. Woods, Lillybrook.
Robt. Wriston, Beckley.

DELINQUENTS

W. C. Mays, Stanaford.
F. B. Puckett, Oak Hill.

MEMBERS

Ritchie County Medical Society

A. Morgan Deerman, Smithville.
E. H. Douglass, Petroleum.
T. Harlan, Auburn.
L. P. Jones, Pennsboro.
A. P. Jones, Pennsboro.
W. H. V. Jones, Mole Hill.
T. W. Keith, Harrisville.
J. C. Lawson, Bridgeport.
E. H. Martin, Oxford.
C. W. Rexroad, Harrisville.
H. M. Rymer, Harrisville.
W. E. Talbott, Harrisville.
J. B. Wilson, Pennsboro.

MEMBERS

Summers County Medical Society

W. E. Bruce, Meadowcreek.
J. F. Bigony, Hinton.
H. F. Bigony, Hinton.
R. G. Broaddus, Hinton.
O. O. Cooper, Hinton.
P. A. Ford, Talcott.
G. E. Gwinn, Hinton.
George K. Nutting, Hinton.
G. L. Pence, Hinton.
D. M. Ryan, Hinton.
J. W. Stokes, Sandstone.
W. A. Wykle, Hinton.
W. L. Van Sant, Hinton.

MEMBERS

Taylor County Medical Society

E. R. Bucklew, Grafton.
B. M. Chenowith, Wendel.
J. F. Chenowith, Simpson.
C. C. Hedges, Grafton.
D. C. Peck, Grafton.
Charles B. Rohr, Alum Bridge.
R. D. Stout, Flemington.
I. A. Stine, Grafton.
C. F. Shafer, Grafton.
F. S. Suddarth, Grafton.
J. W. Travis, Grafton.
A. R. Warden, Grafton.
Paul P. Warden, Grafton.
A. S. Warder, Sr., Grafton.
J. S. Whitescarver, Grafton.

MEMBERS

Upshur County Medical Society

Oscar B. Beer, Coral Gables, Fla.
J. L. Pifer, Buckhannon.
L. W. Page, Buckhannon.
J. A. Rusmisel, Buckhannon.
Everett Walker, Adrian.

DELINQUENTS

L. H. Forman, Buckhannon.
H. O. Vantromp, French Creek.

MEMBERS

Tyler-Wetzel (No Organization)

Victor Hugo Dye, Sistersville.
E. E. Frankhouser, New Martinsville.

DELINQUENTS

J. A. Baker, Shirley.
J. O'Neal Eddy, Friendley.
J. A. Gartlan, Wick.
O. V. Little, Sistersville.

MEMBERS

Nicholas-Webster County Medical Society

J. B. Dodrill, Morgantown.
L. O. Hill, Camden-on-Gauley.
John E. Hyer, Curtin.

DELINQUENTS

S. P. Allen, Webster Springs.
E. C. Bennett, Richwood.
Hugh Dunn, Richwood.
W. E. Echols, Richwood.
C. Sumner Fisher, Richwood.
J. Robert McClung, Richwood.
James McClung, Richwood.
T. R. O'Rourke, Richwood.
H. H. Vean, Richwood.

DEATHS REPORTED IN YEAR

L. S. Brock, Morgantown.
D. M. Brickey, Manbar.
U. H. Debendarfer, Mannington.
C. R. Enslow, Huntington.
J. M. Goff, Burnt House.
John A. Grier, Sistersville.
F. W. Hill, Montana Mines.
Charles B. Lee, Glen Jean.
B. H. Lovely, Welch.
J. M. Lovett, Huntington.
J. E. McDonald, Logan.
William Neill, Charles Town.
B. P. Ratcliffe, Graham, Va.
J. E. Roles, Union.
J. W. Riffe, Meadow Creek.
A. J. Swezey, Huntington.
C. E. Wilkinson, Bruceton Mills.
H. V. Varner, Clarksburg.

TUBERCULOSIS SANITARIUM AT HOPEMONT OVERCROWDED

A report received by the board of control from Dr. J. G. Pettit, superintendent of the State Tuberculosis sanitarium at Hopemont, Preston county, shows that institution to be considerably overcrowded.

At the beginning of December there were 282 patients and at the end of the month and year 291, whereas the institution's capacity is estimated at only 270. The highest number for the month was 294. Of the 291 at the end of the year, 147 were males and 144 females.

In December there was one death, while five were discharged as apparently cured and the same number as improved and seven as not improved.

Eighteen months ago the number of patients was 266, which indicates that the increase has not been particularly rapid.

STUDIES IN CHICAGO

After studying four months in Chicago at the Policlinic and Cook County hospitals, Dr. W. B. Wilson has returned to Charleston and renewed his practice in eye, ear, nose and throat, with offices in the Professional building.

———o———

TWO MEMBERS NOW MAYORS

Not to be outdone by the fact that citizens of Huntington, the state's largest city, elected Dr. W. E. Neal (Republican) as mayor last year, the citizens of Madison, progressive metropolis of Boone county, have elected Dr. E. W. Smoot (Democrat) as their chief executive. Dr. Neal was elected last year in a hard fought party-line election, being the only member of the G. O. P. to come through a winner. Dr. Smoot was elected January 7 on the Democratic ticket in a close contest.

The West Virginia Medical Journal

Directed and Edited by the Committee on Publication

[The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible]

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS:

WALTER E. VEST, Huntington — HARRY M. HALL, Wheeling — J. HOWARD ANDERSON, Marytown — C. W. WADDELL, Fairmont

MR. S. O. NEALE, *Secretary-Business Manager*, Charleston

Entered as Second Class Matter, January 1, 1926, at the Postoffice at Charleston, West Virginia

Volume XXII MARCH : 1926 *Number 3*

THE PROLONGATION OF LIFE*

By CURRAN POPE, M. D.
of Louisville, Ky.

WHENEVER I come before a body like this and I endeavor to voice in words an expression of appreciation for such an honor conferred, I realize to the utmost the futility of the English language to convey emotions. I nevertheless feel very grateful indeed to your State Medical Association for bringing me all the way from my blue grass home to this state of yours to deliver this Oration on Medicine.

In a mixed audience, both lay and professional, such as this is, I shall try and carry to you a message that I think will interest you, as it does me, and that is the question of the prolongation of life. All of us are interested in that proposition. We have been promised dismal things, and we must work to over come them.

"Man that is born of a woman is of few days and full of trouble.
He cometh forth like a flower and is cut down."

It is to overcome this promise of short life and misery that we endeavor to offer some suggestions for the purpose of not only prolonging life, but making it more valuable and useful during the time that it is lived.

The ancient Greeks and Latins said that there were only two really basic problems in human life; one was hunger and the other was love. While that may seem a very broad proposition, still in certain senses, taken philosophically, it is true; and while it is necessary that through hunger we shall live, it is also necessary that all the more esthetic and beautiful sides of life may take part and be understood in that all-embracing term of "love". Hunger is, of all the forces in the universe, the most driving. It comes long before love. One can live without love, but

*Public address before an open meeting of the West Virginia State Medical Association and the laity at Bluefield, June 9, 1925.

one can not live without food, and it has been aptly said that civilized man can not live without cooks. I do not know but that there is a great deal of truth in the saying, although possibly some of us are led to say in our prayers: "God bless Mr. Heinz and Mr. Van Camp for the canned goods they have given us." It is the violation of the simple things of life and the failure to appreciate their value that, in the vast majority of cases, shortens life, so perhaps tonight I may not tell you so very many things that you do not already know, but maybe by refreshing them and re-impressing them upon your memory I may do a service and get you to look at life in the sense that it is worth prolonging, that it is worth while living, and, if it is worth while prolonging and living, it is worth while maintaining at the height of its efficiency.

The question of the prolongation of life involves many factors, and I shall only in a sketchy and a brief way tonight run over a few of them, in order that we may gain, shall I say, a kaleidoscopic view of the position that I take and the means which we may employ to prolong our lives. We should remember that the keynote of life, and the keynote of living, can be given in one word, MODERATION. The reasonable use and the exercise of every bodily function, the restriction of passion, the avoidance of worry, the control of anger and fear, the sensible attitude toward life—these are all essential and basic necessities in the prolongation of life. We are not prone to think of our teeth as spades, but I will venture the assertion that there is many a grave dug with our teeth. We not only do not eat right, but we eat too much. The teeth—and by that I mean the appetite, the excessive eating of food—remove the chances of a long life as the great shovels removed the earth at Panama. You are taught that you can eat a great deal of food if you masticate properly and thoroughly. I may shock you by saying that it is unnecessary to masticate to such fineness. The breaking up of food is an essential thing, but you must remember that if your stomach and the rest of your digestive tract is to work well, it must *work,* for, after all, this human organism gains nothing for its ends without work. Every structure and every fiber in us was made for work—activity; and an attempt to escape the normal activities of life and of function is to court disaster and the shortening of life. Perhaps there is no more foolish idea extant in this great, overfed country of ours than that which says food in large quantities keeps up our strength. Nothing could be further from the truth. As an actual fact, one does not stop and realize that with an excess of food comes the necessity for removing the excess of cinders —the waste material—from the system. If we can, by rational living and rational eating, balance the scales of intake and output, we are placing very little tax upon the organism and maintaining it at the highest point of efficiency. I think that the overindulgence in food is oftentimes the commencing point of serious and crippling ailments that are frequently laid to other causes.

While it has always been true, it is doubly true now that it were a wise thing, if you would prolong your life, to avoid the ingestion of alcohol.

Man is 70 per cent liquid. We therefore need a great deal of water, internally, externally and eternally. You can not live on food without water. Many of the digestice juices are valueless unless they are in weak dilution, and the diluent of the body is nearly always water. Pepsin, for instance, stops after a concentration greater than 1 to 2000, and it needs, then, 1999 parts water to 1 of pepsin. We oftentimes hear it stated that an individual is to drink all the water possible. This is a serious error. A healthy individual may drink freely of water, to the ordinary satisfaction of thirst, but when it comes to the individual that is sick, that is a question for the rational prescription by the physician who has carefully examined and mastered the needs and necessities of the sick person. Remember, there is no general law that fits everybody. You are *you,* and I am myself, and we each have our own individual peculiarities of body and of mind and of soul. These can never be changed, and constitute our personality. Excess of water sometimes is fatal, as we often know in kidney disease, but there are few individuals, sick or well, that are hurt by bathing, and while we have many bathtubs in this country and bathe a

good deal, we do not, as a rule, bathe enough, and of all the pernicious forms of bathing, it is probable that the tub is the worst. It is the dirtiest way to get clean of which one knows. You wash all the dirt into a solution in the bathtub, and then you get up and trust to the towel to wipe it off. There is only one cleanly way to bathe, and that is by the shower. Running water washes away the impurities as they are removed by the bath, and in that way promotes sanitation. But it acts in another way. Moving water is always a stimulus to the human being, and for that reason it should always be employed. Bathing, when used rationally, does not weaken anyone. Get that. The next time when you are very anxious to get a spring tonic and you want some fillip to pick you up, get under a cold shower, and you will find it is the best medicine there is in all the universe. The shower bath, swimming, and the greatest of all forms of bathing, the surf, are to me the most pleasant ways in the world of coming in contact with water. The pounding of the surf, the activity of the body in swimming—and I am rather a good swimmer and quite fond of diving, a water dog in fact—these movements of the water massage the skin surface and stimulate. If you will take a warm shower and follow it by a cold shower, you will find you are keeping yourself in condition and prolonging your life. If you don't think the cold shower is a tonic, a reconstructor and a strengthener, let's turn to the field of athletics. Do you think the honorable Mr. Dempsey or our old friend Zybyszko would get into the ring without his cold shower and rubdown? Oh, no. If he permitted his opponent to get into the ring after having a cold shower, he would permit him to have 33 1/3 per cent more muscular vigor than he. This has been proved time and again, that the use of cold water increases the athlete's power 33 1/3 per cent, and, at the same time it does this, it stimulates the circulation, washes out the muscles, and makes them fresh. I have performed the experiment, and probably you have done so, of taking the frog's leg, with a string at either end of it, with the blood vessels left open, and exercised it with the electric current until it would no longer contract. Wash it out with water, which would be the same thing, if the frog were alive, as washing it out with blood, and it will contract just as many times more. So bathing is the prolongation of health. And I have this to say to the feminine contingent, that of all things on the face of this earth I know of, and I could name probably fifty things the beautifiers use, there is nothing in the world that renders the skin so soft and pliable and active and possessing that rubber-like, resilient quality, as cold water, just everyday plain cold water out of the shower. The animals know this. Did you ever read William F. ("Buffalo Bill") Cody's account of his chase of a great gray mustang stallion that he was very anxious to capture and could not overtake? He chased this stallion along the North Platte River, as I recall it, for many, many miles. The stallion crossed the river many times. Buffalo Bill's horse swam the river, too. What was the stallion doing? He was using the cold water to give him 33 1 3 per cent more strength, and he beat Buffalo Bill at the game. I will say something that may interest you, that if I were restricted in the practice of medicine to using only one thing, and could not use anything else in the treatment of disease, I would choose water.

If you wish to learn in a beautiful way of the influence of the great baths of Caracalla upon the ancient Romans vitiated by dissipation, turn to the end of the first chapter of Sienkiewicz's novel, "Quo Vadis," and read therein how Petronius, the patrician, entering the baths exhausted from the feasts, came forth from the bath strengthened and so bright in mind and body that even his opponent named him "arbiter elegantairum."

Overweight is at present both unfashionable and a besetting sin. We have many reasons for overweight today, and among them may be mentioned the authomobile. The factor of riding in the fresh air, of entertainment, heightens the appetite, increases the digestion, and tends to put on weight. Walking, exercise, work, is getting to be a lost art among the American people, with the increased use of the automobile, will keep you from using those things that God Almighty made for you to use. There are physicians and surgeons in

this audience who know their anatomy and know it well; they know that there are joints and muscles and glands and blood vessels and everything arranged and fixed so that they could be used, and we are not using them, and disuse rusts out a human being just as quickly as disuse of iron and steel will rust it out. Everyone who has had anything to do with machinery knows that there is nothing so hard on a plant as letting it lie idle. The rusting process does more damage than the use of it, and so it is with the human organism. The failure to use every portion of the body tends to break it down, to ruin its efficiency, and hence to shorten life. And remember that the best exercise on earth does not cost you a nickel, and that is the exercise that is taken with the pedal extremities. There is no better exercise than walking. I do not mean to object to the use of the daily dozen and all that; do that on top; but walking, and walking in the fresh air, is decidedly man's best exercise. We live indoors too much; we ride to and from our work; we exercise little or none. How are we to consume the food and how are we to break down the waste tissue and replace it unless we use our tissues, our organs, as they were intended to be used? I want to say this to you, especially to the man and to the woman beyond the meridian of the fortieth year, when they are beginning to slow down and take things easy and get fat—"fair, fat, and forty"—I want to say this to them, that just about that time they ought to learn a race-horse expression, that "It is a lean filly for a long race." I do not mean by that that we should not have enough flesh to cover our bones and render us esthetically attractive, shall we say, to the opposite sex.

How much fresh air should we get? This is an absolutely essential thing, and it is astonishing how much one can get if one only knows how to get it. A few brief seconds of closure of your windpipe, and you have passed to the great beyond. That shows you the essential necessity of the oxygen that the air contains. Let your sleeping rooms be well ventilated. Sleep with your windows open. Zero or below zero does not make any difference. Open them up. Let me try here to correct a few of the profound superstitions about air. Night air is not dangerous at all. Oftentimes it is better than the day air, by a long shot. In the country it is better because the dust from the roads that is stirred by the passing to and fro of vehicles has settled. It is also true that the night air in cities is better, for the same reason. There is less poured into the air during the night, the particles tend to descend, and the air becomes purer. Some of you may not know it, but nearly all "fresh airs" found in cities are in comic operas. Again, let me tell you that damp air is not dangerous. In warm climates it may be disagreeable, not because of the air itself, but because of its weight, a lower barometer causing you to carry more weight on your shoulders. A damp sea air may be the very best air you can breathe. It may be so damp that you can hardly leave anything out without its getting moldy, but it may be the best air you can breathe. Do you know that the body needs air like the lungs, that the pores of the skin would like to have the air in contact with them? Exposure of the body to the air is a very valuable procedure, and I recommend it, in the sanctity of the boudoir. The kind of dress that we used to decry so much in woman is a thing of the past, and it seems to me today that woman is more sanely, satisfactorily, and sensibly clothed than ever before in her existence, and that in summer she has us beaten one full solid block—when it comes to a man in summer with a choker collar and a hot coat, and I see some vests in the audience. It is the men nowadays in summer that are irrationally dressed, and not the women. We shut off the air too much from our bodies, and we dress irrationally. Lighter weight in clothing is certainly an advantage, both in the male and in the female.

From what I said in discussing a paper today you know that I believe that the mind exercises a powerful influence over bodily activities. The increased appetite that comes from joy and the indigestion that comes from sorrow are but samples of what the ordinary influences of mental activity may do. But there is nothing that wears and tears the physical body so much as worry, and worry is but a form of fear, when analyzed, so that if you speak of a person as worrying you

speak of a person in a fearful state. Worry will wear us out. That perhaps was the origination of the old saying that once a cat was killed by care, for a cat was supposed to have nine lives, and yet care and worry killed the cat. Nor do I think that you will arrive at any satisfaction in your worries and your fears by entering lying denial of facts, whether they be of ordinary life, of disease, of deformity, of anguish and suffering, because the denial of a plain, patent fact of daily life is a subtle way of lying to yourself. Nor is it due to an error of mind, or error of any kind. Please tell me will this error of mind, this denial of disease, that disease is non-existent, will it stay for one moment the ravages of the germ of tuberculosis? No. Will it stay the deadly decimation and the suffering of cancer? No. Will it stop the spread of the plague, typhus, influenza, or pneumonia, by calling it an error of the mind? No. Such lying philosophy does not get us anywhere, in the slang of the day. We live longer, we preserve our lives, we play fair with the community, when we deal in the truths of life, and no matter what any cult may say, religious or scientific, real or pseudo-scientific, the facts remain. The public owes to the medical profession the checking of the scourges of the earth, and it is an interesting fact that there is not a cult —I defy you to produce a cult, in or out of medicine—that has ever produced one single great discovery that has saved millions and lengthened life. (Applause.) Not one. Popular magazines decry vaccination. Go back to your histories. Did any of those you loved and treasured get sick and die like flies with typhoid in the Spanish-American war? If that same ratio had held in the World war, there would have been nearly a million deaths from typhoid fever alone. The vaccination with typhoid vaccine reduced the number of cases to a little over 1,000—and think of how many millions of men were engaged in that great conflict. And it is a notorious fact that smallpox was unknown. Think of it. And yet they tell us that medicine and medical men are not contributing to the real progress of the world. It is upon the shoulders of medical men that the burden has ever fallen, and I think I may say, without parade and without laudation, they have picked up the white man's burden and carried it, and those of you today who have many of your loved ones back from the trenches in France have the medical profession to thank for many and many a man's life. And then again, no one can succeed by the hoodooing process of hypnotizing one's self that everything is getting better and better when it is getting "wusser and wusser" and the deadly germ is undermining health and happiness. No matter what your attitude of mind may be, that is not enough; you have to do something more. The great portrait painter, Sir Joshua Reynolds, was once painting one of those marvelous Gainsborough portraits of his, that to this day look like a human being stepping out of the canvas, and a friend came in and said: "Sir Joshua, you have the wonderful art of giving to your portraits the natural color to the skin that is the despair of most painters. Would you mind telling me how you mix your paints to get that effect?" "Ah," said Sir Joshua, "you are a friend of mine, and I will tell you what I mix with my pigments." "I shall appreciate it very much indeed, Sir Joshua." Then said Sir Joshua, "I mix them with brains, sir." (Laughter.) We can not get away from the necessity of mixing a little brains and common sense with everything in life in order to make it successful. Don't forget that common sense and brains teach that you should take good care of the mansion in which that mind lives. What do I care for a heart, or lungs, or liver? What do I care for arms or extremities or trunk or spine if I have not a normal brain, that those parts of my anatomy may function right? So we must mix brains—brains and common sense—with what we do. We must not neglect our minds, but we must not forget that the body is the mansion both of the mind and of the soul. I do not believe in Christian Science. It is neither Christian nor scientific. It was originated by a woman who was an hysterical paralytic, and her ravings were taken down by a very astute Boston lawyer, who wrote "Science and Health." My authority for this is Miss Ida Tarbell, one of the most brilliant women in America. I would get you, after reading "Science and Health" (if you can

stand it—it is an awful job; I took it in homeopathic doses) to turn back to those men called the wise men of Greece. Let us turn back to one called Diogenes, of whom the story is told that he was so well satisfied with life, although living in a cask, basking in the sunshine, that when the great Alexander came by, tears streaming from his eyes, searching for new worlds to conquer, when he said, "Diogenes, what can I do for you?" —the great Alexander, he who cut the Gordian knot, who conquered the world in his twenties—Diogenes said, "Stand out of my sunshine." Study the Stoics, and you will get more food for thought than from "Science and Health." The Stoics believed if you had a pain that could not be cured it was a rational, good state of mind to put up with it the best way you could, and stand it. That is a very much better philosophy, a very much sounder one, and one absolutely consonant with truth. If you want any better authority, I would tell you to go back to one where you are told, "The truth will make you whole."

Rejuvenation. You know we are all at heart Ponce de Leons; we are all seeking the fountain of youth. "Ah," says a man, "if I could but live my life over again, what would I do!" But in reality he does not want to live his life over; he wants to turn the clock back to the vigor and the exuberance of youth, and retain all the foxiness of acquired years. What chance would the other fellow have? It would not be a square deal. That is what Ponce de Leon really wanted; it is what we all want. *I* do not want happiness; I want content. Happiness is a strong drug; like champagne, it is too strong for most of us. But contentment with your lot, contentment with your work, are the real things in life. Whenever you start out to seek youth you will fail; the great natural laws will not permit it; but that we can remain young and live in physical and mental activity young, far back of our chronogolical or age time is true. The heart that sings in the joy of its work, that sees "sermons in stones, books in the running brooks, and good in everything," that is the heart that is young. The body that has not known dissipation, that has lived the rational life, that has followed the simple, ordinary, reasonable plan I have just suggested, should be young way, way beyond the psalmist's allotted span of life. And so we will pause but a moment just to mention the interesting simian activities that have been going on both in the medical and in the lay press. With the advent of Mr. Bryan and Darwinism, rejuvenation and glands, we have certainly gotten to "monkeying with the monkey." But, all joking aside, few of you realize that there are glands in your body that furnish to the blood stream certian substances, infinitesimal in quantity and yet marvelously powerful in their activities. It is the function of these messengers, or hormones, to go to the tissues, to take care of them, to stimulate them, to cleanse them, to burn up the waste material, so that a thorough understanding of what is known as the glands of internal secretion is an essential part of every medical man's training and should be a part of every medical man's knowledge. But, I will here say to those who are tempted by what they read in lay magazines and in the daily press to medicate themselves with glandular substances, perhaps they will find themselves in the very unenviable position of the lawyer who tried to conduct his own case and who found at the end of the trial that he had a fool for a client.

Let us see if we can, out of all this, draw some conclusions. First, that by correct living, life can be made more useful and efficient for ourselves and for the community in which we live. Second, that by correct living our lives can be and will be prolonged. Third, that contentment of mind, the control of fear and worry, is essential, and prolongs life. Fourth, that the value of human life and its accumulated knowledge and wisdom must not be arrested. The death of Professor Wassermann just on the verge of the discovery of a blood test for incipient cancer was a loss so great that every medical man in the universe might well have put mourning on his doorknob. Think of it. Fifth, that youth and age each have their uses and their place, that each possesses communal and economic value, the young to fight, the old to pray and counsel. Sixth, that the greatest function of the medical fraternity is to restore the individual

to health and efficiency, correct his deformities of mind and body, render life worth while living, rejuvenate the individual, preserve the body to the race, and that in a sound mansion of the body may there ever be a sound mind.

"Tell me not in mournful numbers,
'Life is but an empty dream,'
For the soul is dead that slumbers,
And things are not what they seem.

Life is real; life is earnest,
And the grave is not its goal.
'Dust thou art, to dust returneth,'
Was not spoken of the soul."

A PROTEST AGAINST ROUTINE DIETS

A Relation High Fat, Low Carbohydrate and Rich Vitamin Diet in Ulcer of the Stomach and Duodenum

Dr. Seale Harris, of Birmingham, Ala., in an article published in *International Clinics*, December, 1925, very ably defends his attitude on this subject. Basing his ideas on our "newer knowledge of nutrition", he says the ulcer patient's diet should be adjusted to his particular needs, not only as related to the proper amounts and proportions of proteins, carbohydrates, fats and minerals, but its vitamin content should also be balanced, fats for the local pathological condition and foods rich in vitamin to build up the general state of nutrition. Instead of text book diets one suitable to the individual's needs should be prescribed.

Dr. Harris favors the Lenhartz hourly meals, from 8 A. M. to 7 P. M. for the first five or six days and calls attention to the fact that the stomach is not *at rest* during the "abstineence cure" of Ewald and Von Leube, in which nutrition of the patient is being supplied by nourishing enemas.

In "the use of fats to protect the ulcer," Dr. Harris makes it quite plain that a high protein diet does not "bind" the acid secreted by the stomach and shows wherein cream added to the Lenhartz diet is much more palatable and efficacious than that of olive oil as given by Conheim. In cream we get a large amount of vitamin A but none in olive oil.

Basing his opinions on the theory of Decks that excesses in the use of sugar and starches as an etiologic factor in ulcer and other gastric disorders he gives a low carbohydrate diet and says, "In giving a low carbohydrate, relatively high fat diet in ulcer it should be remembered that fats burn in the fire of carbohydrates."

His article concludes by asserting that "it is an accepted fact that the exciting cause of peptic ulcer is an infection, though the predisposing cause is not always apparent.' He gives a very comprehensive daily diet list from the first day to the sixth week and explains why the supply of vitamins is such an important factor in the treatment of ulcer.

—C. A. R.

USE OF INSULIN TO INCREASE WEIGHT

Dr. W. Falta from the "Weiner Klinische Wochenschrift" No. 27, July 2, 1925.

Other than in cases of diabetes, Falta cites the use of insulin in Graves Disease by Lawrence and in Neurasthenia by Harris, also in nursing children by Butterweiser:

In three cases of extreme wasting, where in spite of easy digestion, abundant feeding and rest in bed it had been impossible to increase the body weight, to each of these patients, five times per diem, before meals an injection of 30 units of insulin was given. A diet as varied and abundant as each case desired was permitted; requiring only that there was no appetite, from the first day of treatment there appeared an extraordinary appetite, and the weight curve began an immediate ascension. First, patient gained 20 pounds in 39 days being 25 per cent of her original weight; second, patient gained 14 and a half pounds in 23 days; third, patient gained over 12 pounds in two series of treatment of two weeks each. In all the appetite and gain of weight continued after the treatment was completed.

Careful testing confirms the hypothesis of Falta in 1913, that the hormones of the Islands of Langerhaus must play a role in the metabolism of fats, and there exists an "Insulin Obesity."—W. S. M.

HYSTERIA*

By C. H. MAXWELL, *M. D.*
Morgantown, W. Va.

MOBIUS says: "Hysteria is a state in which ideas control the body, and produce morbid changes in its functions." Another author defines it as "an innate neuropathy of mental origin, and is characterized by a pathological susceptibility to suggestion, and by emotional instability." A person with a good dictionary could soon figure out what that means.

Heredity is a predisposing factor: Charcot maintained it is always hereditary. It occurs in both sexes, and in almost all ages. Those with highly strung and unbalanced nervous makeups are most susceptible, although persons of stolid and lethargic nature may be affected. I have a man of that nature that has had hemi-anaesthesia for years. At least the anaesthesia can be accounted for in no other way.

It used to be thought that women alone had hysteria. The Greeks thought that when a hysterical attack came on, the womb had torn loose from its moorings and went wandering about the body in search of sexual satisfaction. It was not till the seventeenth century that it was described by a French writer as a nervous affection. Charcot in the last century made exhaustive studies of the subject. It was Babinski, however, who established the true nature of hysteria. He seems to have established the fact that hysterical manifestations are the result of suggestion, either by the physician's examination, or from some other source. In a hundred consecutive cases not previously examined, he found no hemi-anaesthesia. This had been the most frequent symptom of those found in the clinics. This was true of all other symptoms, the result of suggestion. Again he found it impossible to elicit a given symptom by suggestion in a normal individual, even by direct suggestion, thus showing the hysterical individual to be pathologically vulnerable to suggestion.

Examinations made without suggestion have lessened the number of patients with the full typical set of hysterical symptoms that formerly frequented the clinics. Bearing in mind the purely mental character of the symptoms and their origin in suggestion, it is easy to understand that the symptoms bear no relation to the facts of anatomy, and are often in crass contradiction of physiology.

In studying the symptoms, it is a good plan to divide them into convulsive and non-convulsive. In the minor forms of the convulsive variety it generally follows some emotional disturbance. It may be preceded by hysterical fits of laughter or crying, or a sensation of choking, and lump in the throat—the globus hystericus. Before the convulsive movements there may be painful sensations in any part of the body. These resemble the aurae of epilepsy getting rapidly worse, and the patient falls in a convulsion. The falling is not instantaneous as in epilepsy, but the patient picks out a soft place to fall, and in the struggles she seems to avoid hurting herself, although she seems to be entirely unconscious. The motions are clonic and disorderly, which slowly subside, and the patient becomes emotional, and gradually recovers consciousness. She seems to have a hazy remembrance of things that happened during her fit, but generally remembers nothing definitely. The abdomen may be greatly distended, and later much gas, and a large quantity of clear urine may be passed. She may have few convulsive movements, and sink into a deep stupor and from which she can scarcely be aroused. She may even go into a cataleptic state.

*Read before the fifty-eighth annual session of the West Virginia State Medical Association, Bluefield, June 9, 1925.

Hystero-epilepsy is uncommon in this country. In typical cases there are areas of hyperaesthesia, especially over the upper dosal vertebra, and over the ovaries. The seizure usually is preceded by certain prodromata,—excitement, foolish talk, unseemly behaviour, and frequent urination. In typical cases there are four stages; epilepti form seizures, very closely resembling true epilepsy, and hard to differentiate. These usually last longer than true epilepsy. A point in telling this condition from true epilepsy is the thumb. In true epilepsy the thumb is always grasped inside the hand, but in hysteria, it is not. After the tonic spasms have subsided there follows clownism, in which there is emotional display of remarkable contortions, or cataleptic display.

Then there is a stage in which the patient assumes attitudes of various passions. And then returns to consciousness, in which she displays various symptoms, chiefly manifestations of a delirium or the most extraordinary hallucinations—visions are seen, voices heard, and conversations carried on with imaginary people. She will relate with great solemnity imaginary events, and make extraordinary and serious charges against individuals. This aspect is grave, for the patient will make these grave charges, and the hallucination will persist afterward, thus compromising perfectly innocent people.

These seizures are liable to succeed each other for several days in succession. This differs from true epilepsy, for in true epilepsy if the condition persists for any length of time it is always serious, and frequently fatal.

After a hysterio-epileptic attack the patient may go into a state of trance or lethargy and remain so for days.

There is no type or form of organic paralysis but what may be simulated by hysteria. Hemiplegia is about four times as frequent on the left side as on the right. The face is not usually affected. The left leg is the most often affected. Sensation on the affected side is diminished or lost. Paraplegia is more common. There is not complete loss of motion, but the legs will not support the body. The knee jerk may be increased, a spurious ankle clonus may sometimes be present, and the feet are usually extended and turned inward. The muscles do not waste and the optical reactions are normal. Ataxia may be present and incoordination may be marked.

A great variety of contractions may occur. They may attack any group of voluntary muscles. They may appear suddenly or slowly, continue for months or years, and disappear rapidly. This is seen most commonly in the arm which is flexed at the elbow and wrist, and the thumb tightly clasped in the hand. Occasionally the last phalanges may be hyperextended. It may occur in one or both legs, generally in one. These cases may be mistaken for lateral sclerosis, and the diagnosis is difficult. Osler tells of a case he showed frequently as a typical case of lateral sclerosis, but it suddenly disappeared, and the laugh was on him.

Hysterical contractures of the abdominal muscles and diaphram produce the phantom tumors that have been so disquieting to the diagnostician and surgeon. It is disappointing to the hungry surgeon after he has made all arrangements to cut out the tumor to find that the tumor had disappeared under deep anaesthesia. *Clonic spasms* are more common than contractures. Rythmic hysterical spasms are the most important. The clonic contraction of a set of muscles causes a rhythmic motion of the affected part as the flexion and extension or supination or pronation of the arm; or of the muscles of the jaw causing the mouth to open and shut in a most uncanny manner. The spasm of the psoas muscle causes the lifting of the leg eight or ten times a minute. Muscles of the trunk produce bowing, or strongly arching the back and retraction of the head. These may alternate.

Tremor may be purely an hysterical manifestation, either alone or with paralysis, or contractures. The movements are quick and slight.

When I was a medical student, one of my neighbors had a little girl 8 years old who had a tremor like paralysis agitans, very distressing to the child, and I took her to the clinic, Dr. Davis took her tremulous hand in his and said to her with great force and fierceness: "Stop it! I tell you to stop it!" and gave her hand a vicious jerk. The little

thing had never been spoken to in that manner, and her tremor stopped instantly. Then he said with the same fierceness: "Now you see! You can stop it if you want to. You have been lying to your parents. You said you couldn't stop it, and you can. Now if we ever hear of you lying to your folks any more, we'll bring you in here and get a red hot iron and bore a hole right through your tongue." The child was permanently cured. How Dr. Davis knew the tremor was volitional and he could scare it out of the child, I never could tell.

Hyper-aesthesias occur in various parts of the body. The most frequent is pain in the head, usually on top, or occasionally on the back. The pain is severe, and has the sensation of having a nail driven into the head. Neuralgias are common. There are hypersensitive spots on the chest and abdomen, pressure on which produce motor manifestations or even convulsions. Pain in the back is almost always complained of by hysterical patients. The sensitiveness may be confined to certain spinous processes. Pain in the abdomen simulates gastralgia and gastric ulcer or it may be almost identical with peritonitis or appendicitis.

Sensory symptoms bear no relation to nerve distribution. Anaesthesia or hyperaesthesia may involve a hand or a foot or isolated patches, or may be sharply limited to half the body. All forms of sensations are usually involved, but dissociated loss of sensation may be present. That is loss of pain or temperature sense without the loss of tactile sense. All sensory manifestation are superficial and disappear on deep pressure, and are more generally found on the left side. The special senses are often involved, but these are only partial in most instances. Motor symptoms manifest themselves in palsies, contractures, tremors, and incoordinations. Palsies may take any form, and often the palsied part has anaesthesia.

The tremors vary from four to twelve a second, and are to and fro. The contractures often simulate organic contractures, and it is hard to distinguish them.

Incoordination shows no ataxia while lying in bed or sitting, but when trying to stand or walk, the ataxia shows up, and often becomes marked. It does not resemble tabes or cerebellar disease, but the movements are extremely irregular, wide, coarse or grossly bizarre.

Tendon reflexes do not present constant phenomena. They may be exaggerated, or diminished, but never lost. Here caution is necessary, as some apparently healthy people have no knee-jerk, especially in children. The Babinski sign is never present.

Taste and smell may be disturbed, and cause much distress. Of the eye symptoms, retinal hyperaesthesia is most common, and the patient wants to be in a darkened room. Retraction of vision is common, and generally follows a spasm, and may last a long time. Color perception is not affected as a rule. Hysterical deafness and blindness may come on together. Hysterical blindness may occur in children. It is important to distinguish between functional loss of power, and simulation.

The most common respiratory disturbance is the deep breath, generally about every fifth or there may be a catching breathing, as when one is doused with cold water. In hysterical dyspnoea there is no distress, and there is no increase in pulse rate. Aphonia is the most frequent laryngeal trouble, and may persist for years.

Speaking of aphonia, I remember a case which Dr. Pershing showed to the class in Denver. The man suddenly found he could not talk. He consulted Dr. Pershing, who sent him to Dr. Black, the throat specialist, who sent him back to Dr. Pershing. The patient wrote on paper, "Dr. Black says I could talk as well as anybody if I would. Am I crazy or am I a damned fool?" The man's speech returned later.

Spasm of the muscles may cause violent effort to breathe and even cyanosis may occur. Hiccough may be present for months. Hysterical cries are remarkable. They may take the form of barking or grunting or mewing. Epidemics of these manifestations have been reported. Gaping or sneezing and yawning may occur.

Hysterical cough may occur, and be persistent, or occur in paroxysms, but is usually dry, persistent, croaking, and irritatingly monotonous to hear.

There may be spitting of blood, and lead to the diagnosis of lung disease. The bloody sputum is not so red as ordinary pulmonary hemoptysis, and probably comes from the mouth and pharynx.

Digestive Disturbances are common, such as depraved appetite, dyspepsia and gastric pains. There may be difficult swallowing, and the food at times is expelled before it reaches the stomach. There may be incessant gagging. The vomiting is done without effort and without nausea as a rule. The most remarkable disturbance in digestive hysteria is the anorexia nervosa. "Loss of appetite" does not express the degree of extreme revulsion to food. The mere sight or thought of food produces intense antagonism. The patients go for weeks without food, and may die of starvation. The emaciation is extreme. These cases are extremely pitiable. Yet they may recover in a remarkable manner, when taken from home and given the Weir Mitchell treatment.

The bowel symptoms are often distressing, especially flatulency. Persistent diarrhoea is often found, and is associated with the taking of food. Another condition is that in which scybala are passed with great violence several times a day. Yet constipation is more frequent, due to loss of muscular power. Sometimes two or three weeks pass without a bowel movement. There may be great pain due to ano-spasm.

Cardiovascular disturbances are common, especially rapid heart action on the least provocation. There may be subjective symptoms of palpitation, and there may not be. Slow pulse is less frequent. Pains about the heart greatly resemble angina-pectoris. Flushing of the skin in various parts of the body is common. There may be intense hysterical sweating. There may be hemorrhages in the skin. These may be fraudulent at times.

The hysterical joint has brought more disrepute on the medical profession than any other one thing. For these affections are most persistently refractory. The knee or hip are most commonly affected, and often follow a trifling injury. It is generally fixed, sensitive and swollen. It is sensitive to touch, and movement causes great pain. In cases of long standing the muscles about the joint become swollen and the joint appears larger. The joint has all the appearances of pathological changes, but there are none, as a rule.

The psychical condition of the hysterical patient is always abnormal. The disease occupies the no-man's land between the trenches—sanity and insanity. In a large number of cases the patients are really insane especially in the sphere of morality. Not the least bit of reliance can be placed on their statements, and for years they will consistently persist in deceiving all about them. This is partly due to a craving for sympathy, but mostly due to complete upsetting of their moral nature. They may become insane and show outbursts of hallucinations and delirium. They keep their bed for months, and finally recover. Yet they show a great tendency to self destruction, and require constant care. Trance and catalepsy occur most frequently after a hysterical attack.

There is usually no fever in hysteria, but there are cases in which it occurs. Osler speaks of a case that had a temperature of 102 degrees or 103 degrees in the afternoons for years. This might give us a cue to not diagnose afternoon temperature and cough as pathognomonic of consumption, especially in a neurotic patient. There are well authenticated cases of hysterical hyperpyrexia. Cases are reported with fever up to 120 degrees or more. Their explanation is impossible. "It is a condition and not a theory that confronts us."

The patient may be taken suddenly ill with various local manifestations and fever. It may simulate meningitis, with retraction of the head, intense pain, contracted pupils, vomiting, all the meningeal symptoms, and persist for a long time, and the physician is patting himself on the back for curing a case of meningitis, when some anomalous manifestation will show he has had to deal with a case of hysteria.

Among visceral manifestations we find vomiting, rapid pulse, vasomotor disturbances, rapid breathing, cough, yawning, retention of urine, anuria, aphonia, spurious aphasia, and other bizarre manifestations.

Hysterical vomiting is usually associated

with nervous loss of appetite. Pain may be complained of, and lead to a diagnosis of organic disease. When pallor, lividity, rapid pulse, flushing and coldness are present their functional origin is easily recognized. Rapid breathing may be present with high pulse rate, but there is no cyanosis, dyspnea, or cardiac distress.

There are no physical signs in hysterical cough, and it may resemble the crow of a rooster, or the yelping of a coyote. Yawning is usually frequently repeated, exaggerated and prolonged.

The abdomen may be greatly distended with gas; or there may be contractures of the abdominal muscles, simulating tumors, which are a source of much chagrin to the surgeon who has whetted his appetite and sharpened his knife for the removal of a fibroid or a cyst, when he finds the tumor has disappeared under anaesthesia.

All psychic symptoms have their origin in suggestion. Hysteria is contagious and the symptoms may be communicated to other susceptible individuals. Emotional cries may come on. There may be fits of laughter or crying, or transient alteration of conduct. These may be preceded by a period of irritability, the patient crying or laughing without any apparent reason. Later a convulsion ensues. This is at first tonic, and may last a good while, unlike the tonic spasm of epilepsy. Later the spasms becomes clonic. The patient is never unconscious, but may pass through all sorts of bodily contortions, with dramatic and passionate attitudes. Then quiet ensues, and generally a peaceful sleep. The rigidity may be so pronounced as to constitute a catalepsy, or lethargy or sleep of hypnosis.

The diagnosis of hysteria is usually easy, but sometimes difficult or impossible for a time. But by a careful study of the manifestations present, the history of the case, the history of the family, especially the mother, the surrounding conditions, we usually can promptly arrive at a definite diagnosis.

The treatment of some of these patients tries the patience of the elect, and a man without infinite tact and infinite patience and infinite self control had just as well turn them over to the Christian Scientist at first as at last, for that is where they will land sooner or later unless he holds them by great common sense.

The first requisite is to get the patient away from herself—to stop the introspection —to get her mind off her trouble and to divert her thoughts from their usual channels. This done, cure is already assured. But let the patient suspect that you don't understand your business, and you need not further expect good results, unless you can demonstrate in three minutes with apomorphine that you do know a thing or two. For this is king of all remedies to break a hysterical spasm and prevent its recurrence.

But for the less violent manifestations, less heroic and more humane methods should be used. Of first importance is pleasant and constant occupation. Useful employment is best, interspersed with attractive recreation. This should be of such a nature that it is pleasant to do, and not over-wearying, although good hard work, and a tired body induce better sleep and better nerve tone and better digestion and all functions of the body under better control.

The Wier Mitchell treatment is the best acknowledged treatment for the graver forms. The main features of this is getting the patient away from her friends and surroundings, and giving her rest and quiet, with judicious feeding and massage, and electrical treatment. The good sense of the nurses in this treatment is the most important adjunct—a nurse that is kind, firm and intelligent is required.

Of course in our own locality we have very few of the worst forms of hysteria. But we have an infinite number of people, women, children and men who have nervous manifestations, of a hysterical nature that give us much trouble. I have no doubt we see hysterical symptoms in our patients every day, and generally fail to recognize them, and treat them for bronchitis, or headache or diarrhoea or female disorders or rheumatism or neuralgia or lumbago or pleurisy or a dozen other things, never looking beyond the symptom most complained of to search out the cause, and we go on day after day and year after year dishing out pills, and powders to symptoms and not hunting causes for the

disturbances, the patient coming back at irregular intervals to get some more pills, or else goes to another doctor for a while and on over to the osteopath or chiropractor, or Christian Scientist, and it is remarkable how these side line people will often cure the patients we failed to benefit—for the reason we have failed to grasp the real condition of things.

We cannot all be nerve specialists and psychological experts, but if we would put one-tenth as much time studying nervous diseases as we do carburetors and spark plugs and balloon tires we would benefit our patients much more. I believe there are doctors "somewhere in America" that rarely think of a person as having nerves—just guts, for every patient that he sees must have ten grains of calomel to "touch up the liver," or three compound cathartics "to clean him out." This is practicing "physics" but not medicine.

For the everyday borderline manifestations we should have some intelligent notions in our heads to meet them. In this neighborhood most people expect medicine instead of advice. We can combine the two, and help our patients and ourselves.

For many hysterical conditions I find pulsatilla a specific. I use that made from the green drug, that made from the dry plant loses this peculiar constituent. It will cure that peculiar choking sensation—globus hystericus, also the clavus, and nearly all forms of minor hysterical manifestations especially hysterical neuralgia of the ovaries, and even for pathological ovaries it is an excellent remedy.

The patient that wants to run off and get away from herself and away from everything will be promptly cured with pulsatilla. "Pulsatilla would cure this patient," I said to my son who had just started in practice after nineteen years of school and hospital training. "Pulsatilla? What's that? I never heard of it."

He had gone through his whole medical training and had never heard of the most useful nerve sedative in the whole range of materia medica and therapeutics. In certain nervous and hysterical manifestations it has no peer. It is as much a specific as diphtheria antitoxin or as neosalvarsan.

Strychnine as a stimulant is beneficial in many cases. Valerian and cypripedium and gelsemium are good remedies. In the graver forms the bromides and veratrum viride have to be used.

It takes infinite patience, as I said before, but one's patience can often be modified by appropriate doses of apomorphine. There is nothing that will act so instantaneously on a hysterical spasm as this drug. And in many of the cases the spasms refuse to return, and the patient is started on the road to improvement. It is a remarkable fact that those patients who "throw a fit" at every turn are permanently cured with a tenth of a grain hypodermically. At least this has been my limited experience. None of them have had the temerity of "throwing a fit" and taking the chances of a second visit from the demon doctor.

Hysterical coma may easily be mistaken for uremic coma, or apoplexy. They are usually in men who are absolutely unconscious and incapable of being aroused, limp, inanimate masses. After a few hours the patients arouse, get up and go home apparently no worse for the attack.

Dr. Wingerter tells this joke on himself. He was called in by one of his neighbor physicians to see a hysterical case that had baffled every line of treatment. Dr. Wingerter gave her the pantomine hypnotic treatment, and complimented himself on his success in this line. The next day this woman came to his office in high dudgeon and said: "What kind of hocus-pocus were you trying to pull off on me yesterday? Do you think I have the hysterics? I don't have any more hysterics than you have," and out she went, cured in a miraculous manner.

Wilcox does not seem to adhere to overkindness in breaking hysterical spasms. He recommends Amyl nitrate, or ethyl bromide or ether, but says chloroform is not disagreeable enough. He also recommends a capsule of ether that will explode in the stomach, thus bringing them abruptly to their senses.

Deep pressure in the epigastrium often will stop an hysterical attack. The same over the ovaries is generally effective, especially

if it is done with enough force to cause pain.

A good plan is to leave the patient alone in a room and when she comes to herself and there is no one around to palaver over her, she will feel awfully insulted by not having caused a big hullabulloo among her folks and neighbors, and will be less inclined to throw a fit on every slight provocation.

The object of this paper is not to offer anything new in the way of treatment, but to call attention to various minor manifestations of hysterical origin or hysterical conditions, and leave the graver forms to be fought out with the Wier Mitchell treatment, and the infinite tact of the nerve specialist.

The borderline patients—those not very sick—not very well—and show neurotic and hysterical manifestations, that cannot be classed as hysteria, are the ones we meet with most frequently. These we can reach without much trouble, but they need firm, kind, and decisive management.

I sometimes think that our medical schools and medical training run too much to the side of laboratory findings, and not enough to bedside findings. Recently I attended a clinic in Uniontown, Pa., when an eminent internist from Philadelphia said, "I don't want to know anything about the patient before I see him. I want no laboratory report until I make my findings. When I come to my conclusions, then I want to see the laboratory report and see how our findings agree. If we agree, all right. If not, I go over the patient again to see if I have been mistaken."

Recently in Chicago, I heard a prominent physician say to his assistant: "Chart for me the blood pressure, and blood analysis, the urinalysis, and Wassermann, pulse, temperature, and respiration with physical examination, with full history of the case, and have the report ready for me to examine before I see the patient."

Personally when I visit a patient who is so fortunate as to have a nurse, and the nurse picks up the chart for me to look over, I say: "I came to see the patient, not the chart". Sometimes I have manners enough to look at the chart after I have seen the patient. It seems to me, many of us look at the laboratory reports, and clinical charts and study them instead of the patients. Patients first —charts second. Medical school and interne training run entirely too much to surgery, and not enough to every day medical work. The general practitioner sees a hundred cases of general medicine to one of surgery, and what surgery comes his way is a broken arm, or cut face, or lancing an abscess,—all simple, and requiring little surgical skill to treat. The medical men are turned out of the schools with wrong ideas of the relative importance existing between medicine and surgery. It takes much more skill, judgment, tact and patience to handle a neurasthenic or hysteric than it does to take out an appendix. A gall bladder operation or ablation of ovaries and tubes is difficult, but not half so nerve racking as the continual stress put on one's endurance in handling the "nerve" cases.

The time was when general medicine was the main object of medical training. It now runs to surgery and laboratory work.

If you notice, most papers in medical meetings are surgical, and many of them scarcely appreciated except by those highly trained along surgical lines. In this Bluefield meeting the program shows more than twice as many surgical as there are medical papers.

An early swing-back of the pendulum would be of great benefit to the public in general.

DISCUSSION

DR. JEFFERS, President:

We have with us today a neurologist of note, from whom we shall all be glad to hear, so I shall ask Dr. Curran Pope, of Louisville, to open the discussion on this paper.

DR. CURRAN POPE, Louisville, Ky.:

To attempt in a few minutes' time even to approach the question of hysteria should make one feel timorous. Hysteria, as understood today, is not the bizarre, ununderstandable disorder of previous years. Today we recognize the question of psychic determinism; that is to say, that every symptom that the hysteric may have is duly and accurately determined. We may naturally, in our therapeutics today, revert back to the instruction over three hundred years ago given to us by the great Bard of Avon: "Seek out

the cause of this effect (or rather say the cause of this defect), for this effect defective comes by cause."

Every hysterical effect has its cause, and, when found, has a reason justifiable within the mentality of that individual. Today we do not recognize that the symptoms are bizarre, as is so often written, because a symptom that is justified by the logical (if pathological) reasoning of the individual is not bizarre to that individual, but bizarre to you and me because we have not correctly seen and interpreted the meaning of the particular symptom that the patient has. The doctor was correct in his statement that the vast number of hysterics are in great measure dangerous people, because the hysteric lives in a world of fantasy, a fantastic world that he may people with ideas and with thoughts and transfer them to the physician who is treating him. In fact, the physician treating a psychoneurotic must *per se* have the transference of the hysterical mind to himself if he is to successfully combat that condition, and therefore he stands always more or less in danger of the hysteric and his or her symptoms.

The hysteric is an individual that is subject to conflicts. To try and put it simply, we may say that on one side is a desire and a wish and a thought, and on the other side an ethical or other consideration that holds the patient back; and that, as a result of the locking of horns of these two conflicts in the psyche of the individual, we have a symptom developed. Now that symptom, then, is merely the outpost, the sign, of a mental state that is unconscious to the hysteric, or, we should say, to the psychoneurotic. That symptom, the result of conflict, can best be removed by finding out what is the conflict and so re-educating the psychoneurotic that the conflict is removed and thereby restoration brought about.

I have oftentimes been egotistic enough and flattered myself with the belief that I had personality and capacity sufficient to be about as suggestive as the next individual, and I will say this, after thirty-five years of experience, there is today no more signal failure of the theory of suggestion than in the psychoneuroses. In the process of analysis and the finding out of the individual conditions that cause these symptoms, and in the re-educative process that follows, we very naturally are, in a way, suggesting, if you please, a better state, but it is a dangerous thing to suggest to psychoneurotics. The best thing to do is to educate them to orientate themselves to reality, because they are living in an unreal world, filled with fantasies, filled with unreal ideas. It is, in a way, bringing their feet to earth, orientating themselves with the true and actual state of life, that brings about a true restoration of the hysteric.

It is true that, with some individuals, threats may cause the symptom to disappear, but it is also true that hard pressure causes the pile to go deeper and deeper into the mud and makes it harder for the man who comes after to extract it. Personally, I do not believe the treatment of the psychoneurotic belongs, in any sense of the word, to the family physician. It is a highly specialized and trained field to those who have devoted long years of study to the management of these cases. The management of temporary hysterical states is all very well indeed, but the longer they are allowed to run, the more harm is being done the patient and the more difficult it is to bring about a restoration. Symptom after symptom, psychic state after psychic state, is converted from idea to physical manifestation. The idea in the mind, understand, is converted into the physical manifestation, and the relief of the physical manifestation does not by any means mean that the idea has been relieved. It is only by taking hold of that idea and orienting your patient to reality that you bring about a fundamental restoration. As to Christian Science or any other cult, nothing could be more dangerous, because it simply increases the repression. It may temporize; apparently it may relieve; but it is, to my mind, like an individual's constantly using cocain on the conjunctiva while the cinder remains imbedded therein, while the simple, accurate, correct, scientific way is to stop using the cocain and take the cinder out. Christian Science—neither scientific nor Christian—offers nothing to these cases. Conceived in iniquity and born in sin, the propaganda of

a hysterical paraplegic and a hysterical hemiplegic, what can you expect? It was conceived in the womb of sin, and "Science and Health" was written by a bright Boston lawyer for the accumulation of dollars and cents. If you don't believe me, go to the writings of one of the brightest women in America, Ida Tarbell. Mrs. Eddy was an hysteric herself.

Remember, the disappearance of the symptom means nothing in itself. You have not gotten rid of the idea; you have simply made the patient realize, for the time being, that it is more comfortable to swap a disagreeable state for a less disagreeable state. You have not fundamentally, psychically, psychologically, or in any way obtained a degree of relief, or catharsis of the mental state, that will in any wise point to a permanent betterment or relief of the individual.

This is a tremendous subject, and a subject that you meet in everyday life. I repeat, once again, it belongs strictly to the domain of the neurologist, strictly to the domain of the psychologist-neurologist, and not to the psychiatrist at all. It is a special field for special work that can only be followed after long training, and physicians practicing in the country have got their hands full of troubles, Heaven knows, without attempting to relieve one of the most trying and serious affections to which the human being is heir.

I thank you.

DR. MAXWELL, closing the discussion:

I should like to know what those folks in the country are going to do who have not the money to go to a highly trained specialist. I should like to know what we are to do with them. We have to do the best we can. We can not help ourselves, and they can not help themselves. We have to deal with the conditions that meet us every day. We do not meet these bad cases, I think, in the little country towns.

THE TREATMENT OF ECLAMPSIA BY THE GENERAL PRACTITIONER *

By BERNARD S. CLEMENTS, M. D.
Matoaka, W. Va.

I SHALL offer no apology for attempting to discuss this time worn subject before a body of medical men, representing the various specialties, for I feel that the responsibility in treating this very grave symptom complex should rest equally on the obstetrician, the general practitioner, the internist, the eye man, the neurologist and the surgeon.

For convenience of description I have chosen to divide the treatment of eclampsia into pre-eclamptic and the eclamptic seizure. This division necessarily infringes somewhat on the allied condition and most probable cause of eclampsia; the toxemia of pregnancy.

The treatment of eclampsia can best be considered under two headings: Preventive and Curative.

The well recognized prodromal symptoms, persistent headache, blurred vision, epigastric pains, vertigo, nausea and vomiting, edema and a rising systolic blood pressure should leave no doubt in the attendant's mind but that his patient is approaching an eclamptic seizure. Such a patient should have a hot bath and be ordered to bed in a quiet, darkened and well ventilated room. I instruct the nurse (if I am fortunate enough to have one) to give the patient a glass of water every hour through the day, and fill her stomach with water at bedtime. The diet is restricted to milk, fruits, fruit juices, and a few green vegetables. Sodium bicarbonate and sodium salicylate 15 grs. each is given every four hours for the first twenty-four hours, the sodium bicarbonate for its alkalinizing effect, the sodium salicylate for its diaphoretic (cholagogue) effect. Sodium

*Read before the Mercer County Society, Matoaka, November 24, 1925.

salicylate is contra indicated in the typical nephritic type of cases with much edema and albumin.

I do not hesitate after the seventh month to give these patients 3 grains of calomel and one-half grain resin of podophyllum followed by saline purge. I have never seen labor initiated by this treatment, and should it be, I do not feel that the mother or baby would be any worse off. As a laxative thereafter, a tablespoonful of plain sodium phosphate is given morning and bedtime or milk of magnesia in one ounce doses after meals. These patients are also given 10 grains of urotropin in half-glass of water three times a day. When there is a great deal of restlessness and an insufficient amount of sleep I give 30 grains sodium bromide or 10 grains suphonal at bedtime.

Should I be fortunate enough to prevent an eclamptic seizure by this treatment, the patient is instructed to continue a very low protein diet during the remainder of her pregnancy. She is encouraged to drink plenty of water, eat green vegetables and fruits and drink milk. She is also instructed to take moderate exercise in the open air, preferably walking. Her urine and blood-pressure are examined weekly during the remainder of her pregnancy.

An eclamptic seizure is a tragedy in the best regulated maternity hospitals; it is a horrible tragedy and a frightful nightmare to a poor country practitioner who is frequently miles from another physician or trained assistants, other than the time-honored "grannie."

I do not know of the treatment of any condition in which it behooves the physician "to restrain the flights of aspiring science with the curb of common sense" more than in eclampsia.

In the treatment of an eclamptic our first efforts should be directed towards controlling the convulsions. Morphine is undoubtedly the one drug we can depend upon for this purpose. I give one-fourth to one-half grain by hypo. immediately after seeing a patient in convulsions. One-fourth grain is repeated every hour if convulsions persist. A high colonic irrigation is given, either saline and soda solution is used or one pint of Karo syrup to a gallon of warm water. Thirty grains of sodii bromide and 15 grains chloral hydrate in saline solution is put in rectum after the irrigation. The patient is put to bed in a dark quiet room, wrapped in woolen blankets and a number of quart jars of hot water wrapped in blankets are placed about her, an ice cap to the head. A good sweat generally follows this. One-fourth grain pellet of elaterium is placed on her tongue if she is unable to swallow, and a large clothes pin is kept handy to place between her teeth when convulsions start. I do not use wet packs, they require too much manipulation and exposure of the patient. I rarely use chloroform inhalation to control convulsions for reasons well known to all of you. If any anesthetic is used it is ether.

Should I be able to control the convulsions by the above method and the patient is not in labor and her time not up, I intensify the eliminative treatment outlined for the pre-eclamptic. I have never done a venesection in these cases, due to the fact that I never have sterile saline solution available to replace the volume of blood removed. I look upon venesection as a very justifiable treatment when it can be properly carried out. I have never had any results from the use of veratrum in these cases, probably due to the fact that the drug had lost its potency by being carried too long in my obstetrical case or on a drug store shelf.

If convulsions persist in spite of the above treatment I institute some method of bringing on labor or hastening the termination if labor has already started. This is usually the most trying ordeal a general practitioner has to undertake and one that taxes his ingenuity and skill to the limit, due to unfavorable surroundings, unskilled help and improper equipment.

If the patient is a multi-para, or a primipara for that matter, and the cervix is soft, patulous and slightly open, I usually insert a large size soft male catheter into the uterus and pack the vagina with gauze, and give four minims of pituitrin. Labor generally progresses very rapidly and gives sufficient cervical dilation to permit the use of forceps or version should a hasty delivery be necessary. If the cervix is tight and rigid I resort

to the use of metal dilators to get sufficient dilation to admit the ends of two fingers. I then do a manual dilation the rest of the way. If these patients are well under morphine you can do considerable manipulation of the cervix without producing a great deal of pain. If forceps or version becomes necessary, I use ether as an anesthetic and terminate labor rapidly, using as little force as possible. Free bleeding after delivery is encouraged in these cases, but not to the point of exsanguination.

If convulsions persist after delivery, which they sometimes do, especially in the nephritic type of cases, eliminative treatment should be pushed by giving high colonic irrigation, using either saline or glucose solution, free purgation with saline cathartics, morphine, or bromides and chloral by rectum to control convulsions. Give plenty of fluids if patient is not too edematous; sweating should be encouraged, but not by the use of strong diaphoretic drugs. When elimination has been well established in these cases, they usually make an uneventful recovery, a few of them, however, may carry nephritic symptoms for several months or may even become "chronic nephritics." These patients should always have a tonic treatment after the storm is over. I have gotten the best results from Bashams' mixture four drachms after meals and a hypo. of 2 grains iron citrate every other day. The urine and blood-pressure of these patients should be watched for at least two months.

In a series of approximately eighteen hundred deliveries in the past eighteen years, I have encountered eclampsia eight times, which averages a little low according to statistics. I attribute this to the fact that my patients have been mostly hard working women who lead an active life, a condition which favors elimination on the part of the excretory organs.

Ante-partum eclampsia was present in two of these cases, intra-partum eclampsia in four, post-partum eclampsia in two. Four of these cases were primipara, and four multipara. Forceps were used in three cases, version in one. Ether was used as the anesthetic in all cases when forceps were used or version was done.

I am fortunate enough to report the recovery of all mothers. Four babies were lost.

CHLORINE IN THE TREATMENT OF RESPIRATORY INFECTIONS*

By C. R. KESSEL, M. D.
Morgantown, W. Va.

AN ARTICLE, appearing recently in *Popular Science,* states that each person in this country averages three and seven-tenths colds a year. The enrollment in the University this year is more than 1900. If we assume that our students have the average number of colds, and we believe that because of their indoor life together with almost no exercise they are more subject to this condition, the total number of colds in the student body for the year would be in excess of 7,000. Add to this the thousands of cases of sore throat and bronchitis and you readily see what a tremendous loss from an economic standpoint as well as the incalculable damage to the individual health these infections produce. Thus it was with great satisfaction I read first about the recent work with chlorine in the prevention and treatment of respiratory infections.

A perusal of the literature reveals that chlorine in chemical combination or as a gas is not new, by many centuries, in combatting bacterial action. When Dakin announced his solution as something new it was pointed out by students of surgery that his was only an

*Read before the fifty-eighth annual meeting of the West Virginia State Medical Association, Bluefield, June 10, 1925.

old friend dressed in new clothes. Pulmonary tuberculosis was treated with chlorine gas by French and English physicians more than a century ago. In 1816 the *London Journal of Science* stated, "Chlorine is known to be an elementary body of the greatest activity, and it is believed to have a wonderful power over certain diseases of the lungs which at the present time we are helpless to alleviate." At that time there was a period of great exaltation such as we are in now. Then the inevitable happened. After all the diseases to which flesh is heir to were treated and said to be cured, pessimism came. Just as the germ theory of disease was shelved for nearly three centuries, chlorine was forgotten until a few months ago.

We probably owe the revival of chlorine in this connection to the director of the Student Health Service at the University of Arkansas, who used it during the influenza epidemic in 1918. It was reported that the incidence of that infection was reduced in a substantial manner by giving the students and faculty prophylactic inhalations. Four years later a gas chamber was made for the medical service at Camp Perry, Ohio. Their report was so promising that the government appointed two well trained scientists, Drs. Vedder and Sawyer, who were then stationed at Edgewood Arsenal, Maryland, to make extensive and thorough study of chlorine in the prevention and treatment of respiratory infection.

Vedder and Sawyer made their first public report in the *Journal*, March 8th, 1924. Some of those early conclusions have been modified as a result of subsequent experiments, but the substance of their findings have been amplified by investigators in many places in this country. We are trained to think of it in its two great aspects, prophylaxis and treatment. I believe that we can safely say that it does have a definite and valuable prophylactic effect against cold, bronchitis, influenza, whooping cough, diphtheria, and sorethroat. We further believe that it modifies these infections when treated early and hastens their recovery. All the good that we were able to obtain came in those students who sought the gas during the early acute stage.

If chlorine does good, how does it achieve its results. Vedder believes it does good in four ways. First, Bacteriocidal. Bacteriological examination has not given much positive information. As you well know they have not been able to isolate in pure culture any germ which may be said to be the specific cause of the common cold. On many occasions the number of colonies from cultures made from the nose and throat before and after chlorination has not materially differed. It has been demonstrated, however, that the colonies of the common bacteria are not as vigorous after chlorination as before. In many instances the pathogenic organisms are less resistant. It may be that the organism or organisms responsible for the infection are more susceptible to the bacteriocidal action of chlorine.

Second. Chlorine is an irritant and as such stimulates the flow of lymph, thereby mechanically cleansing the surface. This irritant action causes a primary constriction, followed by a prolonged dilation of the capillaries. With the increased blood supply comes all the protective agencies of the body.

Third. Phagocytic action. We do not know whether the total number of leucocytes is increased or not. A white cell count immediately after chlorination will often show a diminution of two or three thousand. There is no doubt, however, that there is a relative leucocytosis in the respiratory mucosa as we would expect in any irritated tissue.

Fourth. Hypochlorous acid is formed by the union of chlorine with water. C12 plus HOH equals HC1 plus HOC1. The hypochlorous acid, being an oxidizing agent, destroys toxins as well as bacteria.

Method of administration. There are the open and closed methods. In the closed method a machine releases the proper amount of chlorine mixed with air and the patients breathe this through masks fastened to the head. Machines on the market now have as many as five outlets. Then there is the closed method such as we use at the university. We set apart our treatment room an hour each morning and afternoon for chlorination alone. As many chairs are brought in as there are patients, sometimes as many as eight at one time. There are two

difficulties in this. We lose the room for other purposes at that time and the chlorine corrodes the metallic substances there. The room we use is 15x21x9, thus containing 2835 cubic feet air space, less that occupied by cabinets, tables, chairs and other equipment. The transom is kept wide open for ventilation. The treatment continues for an hour. The concentration is maintained as nearly 0.015 mg. of chlorine per liter of air as possible. The concentration is estimated with potassium iodide and starch paper, which is dampened. The chlorine unites with the KI which forms KCl and releases free iodine which in turn unites with starch to give a blue color. The proper concentration gives heliotrope blue in 45 seconds. If the tidal air is 500 c.c. and the respiration rate is 18 the patient will breathe a half million c.c. of chlorinated air in an hour, and that air would contain 2.5 c.c. of pure chlorine gas.

The apparatus we use is really quite simple. It is called the Chlorinair and was purchased in January. It is composed of two essential parts. On one side is a compartment for a small tank of compressed chlorine. It is fitted with a cock and a tube which leads the gas into a measuring cylinder. This rests in a larger cylinder partly filled with water. The measuring cylinder is of definite size and so made that it fills itself and empties itself at equal intervals. Knowing the size of the chamber being used one may count the pulsations and know when the desired concentration is reached. When the proper concentration is reached the measuring cylinder is elevated and the gas allowed to bubble through the water slowly so that the proper concentration may be maintained. It has been found that the concentration should not vary from the 0.015 mg. per liter more than 0.002 of a mg. A variation more than that above sets up too much irritation and if it goes below more than that it is not effective. Chemistry students complain that it is not concentrated enough. They get used to higher concentrations. Each patient was given a laxative, depending on the individual's need and desire. Those who had swollen nasal mucosa were sprayed with a preparation containing one grain each of oil of cinnamon, camphor, and cocain to an ounce of liquid alboline. Those who had a temperature were sent to bed. An expectorant according to the stage was given to those who had bronchitis.

This questionnaire was mailed to those who took the treatment. This one had the answer as written by the patient.

To Those Whom it Concerns: I am addressing a letter to all those students who have taken the Chlorine Treatment from this office. You may be aware that the literature on the subject of Chlorine in Respiratory Infections is quite limited to date and I am trying to gather some accurate and scientific data. I will make a report on the subject before the State Medical Society in June. Will you kindly fill out this questionnaire and leave it with me or the nurse at the Health Service before Saturday noon May 30th? Your report may assist us a great deal.

1. Was your infection cured? If so how long did it take?
2. Was your infection improved in any way by the treatment? If so in what way and how much?
3. Do you consider the treatment a complete failure?
4. Did the chlorine harm you in any way?
5. Criticise the treatment in any way you care to.

Treatment was given to 174 different students. We were able to get replies from 104, as follows:

Cured	28
Improved	52
No beneficial result	18
Harmed (?)	6

Five of the last six thought their cough aggravated by the chlorine. The other one developed broncho-pneumonia two days later. He thought the chlorine may have caused it. The eighteen failures were students with a susceptibility to colds and bronchitis. As one girl said that her cold lasted seven weeks after the treatment she considered it time lost in taking the treatment.

WARNINGS

1. Nasal passages must be open, if the head cold is benefitted.
2. The infection must be in the acute stage, it is not much good after the third day.

3. Treatment must last one hour.
4. Concentration must be near 0.015 mg. per liter air.

DISCUSSION

DR. C. H. MAXWELL, Morgantown:

I know nothing about this chlorine treatment, except that my son, who has practiced with me, gave this ampoule treatment to several school teachers, and they thought they got good results.

DR. OSCAR BIERN, Huntington:

I have been using the chlorine gas treatment for respiratory infections for about two years. I was stimulated to try this out by seeing Vedder and Sawyer do some of their original work at Camp Perry while still in service. I use the open treatment, using an apparatus much like the one Dr. Kessel has described. The computation of the cubic contents of the room has been carried out as accurately as possible. We have treated several hundred cases, including whooping cough, some sinus infections, and some bronchitis, the bulk of them being acute coryzas. We are not fortunate enough to get our cases to come in early. Most of the cases, when they come in, give histories of having had a cold lasting forty-eight hours or more. The treatment is given as Dr. Kessel has outlined. The nasal mucosa is shrunk, using usually a simple solution of adrenalin. We use a fan to keep the gas going, because it is heavier than air and will sink. After the treatment we give a simple gargle of salt and soda, because some of them complain of some irritation. I have not had much effect from the chlorine; have not found this procedure of much value, though it gave promise at one time of doing some good.

One caution which Dr. Kessel did not sound is that people with bronchial asthma or hay fever should never under any circumstances be allowed to inhale chlorine.

DR. J. EDWARD PAYNE, Clarksburg:

I have been using this chlorine treatment for about a year and a half, and my results have been rather disappointing. I have had only a small percentage of cures, but most of my people have gotten a good deal of relief. As has been said, most of them come too late. Another feature is that these people, or a great many of them, have some complication, an old sinus, posterior rhinitis, tonsils, etc., which has not cleared up, and we get no results.

I believe the type of machine which generates chlorine as it is used, by electrolysis, is much better, though I have been using the other apparatus.

It is a routine practice in a prominent hospital in New York, I believe, to have all the patients who are going to be operated on the next day come in for an hour's exposure the day before, and that has cut down the post-operative pneumonia very low.

DR. GEORGE M. LYON, Huntington:

Undoubtedly there must be something in this, though we seem to be far from getting at the heart of the matter. In the summer of 1918 I was in the chemical warfare service. There was a strong concentration of chlorine on the whole reservation most of the time. Then in September the terrible influenza epidemic came along, and there were practically no cases of influenza among the men in the chemical warfare station, in spite of the fact that none of them lived in barracks, but lived out all over town. In the engineers' barracks they had a very high incidence of influenza, although they stayed in barracks. They had a good many complicating pneumonias and a rather high death rate. I think not a single pneumonia developed among the men in the chemical warfare station. At Edgewood Arsenal they had the same experience.

In the few cases of pertussis in which I have seen chlorine used, it has actually done a great amount of harm, and has caused an embarrassing situation for the medical man, but I feel if we keep hammering away at the thing the time will come when our chlorine treatments will be of value.

DR. STERN:

I was stationed at Fort Myer. During the epidemic there we had a great many cases of that serious type of pneumonia in which the majority of cases were fatal. In our desperation we were trying to find something to

lessen the number of cases we had of that kind. The resident surgeon there at that time, it happened, was an eye, ear, nose and throat man. I asked him if he could make any suggestion for using something in the nose and throat that would be of some benefit in destroying the germs there, though we did not know just what germs we had to contend with. He suggested that we might get some benefit from dichloramin-T. I had a fresh preparation made, put it in an atomizer, and tried it on myself three days. I had a rather severe cold. It seemed to benefit it, instead of acting as an irritant. I took deep inhalations when I would spray it, and found I was somewhat benefited. I decided then that I would risk it in my ward, and started the use of it in every case that was admitted. I found then that the cases of that type of pneumonia did not die. After that I had some experience in Pittsburgh, where I adopted it on the second floor of the hospital. On the third and fourth floors it was not used, and they were developing those serious cases, but on the second floor I had none. I was forced to believe that as a preventive there was some virtue in it. It would seem at least it is a good precaution to take in a great many cases.

DR. KESSEL, closing the discussion:

We have to recognize that this treatment is something new, and it may be we have not learned yet how to use it best. As the years go by and we get some more experience, perhaps we shall get a lot more benefit from it.

I was rather surprised that the experience reported here with whooping cough was not more satisfactory, because almost everybody who has been reporting in medical publications has thought good results were obtained from this treatment in whooping cough.

I should like to say that the universal criticism these students make in their questionnaires is that they did not come back and take the treatment; that they were improved for the time being and neglected to come back the next day or the third day. I do not know how many of them said if they had come back a second or third time they thought they would have been improved.

It is a matter on which we should keep an open mind.

SURGERY OF THE THYROID GLAND*

By ROBERT P. BAY, M. D.
Baltimore, Md.

THE diseases of the thyroid gland, such as exophthalmic goitre and adenomatous goitre with hyperthyroidism, have lost their former place among serious and fatal surgical ailments. This is due in a great part to the secure foundation laid by Theodore Kocher in Europe, as to the surgery of the thyroid. Due credit should also be given to the Mayo Clinic, George Crile, Maringe, Lenhart and Kimball for notable contributions in this field. The present great reduction in surgical mortality demonstrates the benefit of the medical and surgical teamwork, in classification and diagnosis of thyroid diseases.

Although there are several classifications the clinical classification of thyroid diseases used in the present paper is that developed by Plummer, in which the structural, functional and etiologic characteristics are correlated on fundamental grounds into nine distinct diseases:

(1) Diffuse colloid goitre.
(2) Adenomatous goitre without hyperthyroidism.
(3) Adenomatous goitre with hyperthyroidism.
(4) Exophthalmic goitre.
(5) Myxedema.
(6) Cretinism.
(7) Myxedema of childhood.
(8) Thyroiditis.

*Read at the Annual Meeting of the Raleigh County Medical Society, Beckley, W. Va., Oct. 15, 1925.

(9) Malignancy.

In the foregoing types of diseases, only the first four and ninth need be considered, as at least ninety per cent of all operations of the thyroid gland are performed on patients who have one of these five diseases. The accuracy of assignment of each case to its correct classification before operation is aided by the determination of the basal metabolic rate, and is verified after operation by pathological examination of the thyroid tissue removed. Accepting the pathological examination as correct, the clinical diagnosis has been found to be an agreement therewith in approximately ninety per cent of the cases.

In a series of one hundred and thirty-five cases without reference to the type of disease, there were no cases within the first decade of life—in the second decade there were ten cases—in the third decade there were fifty-five cases—in the fourth decade forty cases—in the fifth decade twenty-one cases—sixth decade eight cases—seventh decade one case. About 85 per cent of the toxic adenomas and exophthalmic goitres occurred in the second and third decade of life. Colloid goitres are strung out over the third, fourth and fifth decades.

Twenty-two cases were males and one hundred and thirteen females. Ninety-four cases were married people. The length of stay in the hospital before operation was from two days to as much as four months for an average of about eight days. The length of stay in the hospital after operation was from six to fifteen days, or an average of about a week.

In twelve cases only the left lobe alone was involved; twenty-five cases both lobes and the isthmus were involved; while ninety-eight cases involved the right lobe and isthmus.

The basal metabolic rate varied in the cases as to type of disease encountered—in the exophthalmic and toxic adenomas, the rate varied from 33 to 103 per cent. In twenty cases it was above 50 per cent even upon two examinations after periods of rest in bed. In several of the colloid goitres the basal metabolism was as high as twenty-two per cent, some normal and three below normal.

Our routine preoperative treatment in all of our cases is (1) absolute rest in bed, (2) ice collar to neck, (3) Calcium lactate grs. xv. Bicarb Soda grs. xv q. 4 hours, (4) Lugol's Solution 20m. every A. M., (5) Exclusion of visitors. Some patients are taken tc the operating room for several days, so as to accustom them to what is to follow. At time of operation a continual stream of hot salt solution is kept running over the gland, sc as to wash out the secretion of thyroid and keep it from gaining entrance to the blood stream. G. O. & E. was used in all cases except fourteen in which Ethylene was used, due to some complication.

After operation we use Murphy's drip with calcium lactate grs. x to pint. Morphia is used freely. Patient is dressed on the third day and every two days thereafter. They usually sit up on the seventh or eighth day and then are discharged.

In our series there were thirty-five purely diffuse colloid goitres. A diffuse symmetric enlargement of the thyroid gland characterized pathologically by an excess of colloid in the acini, and unassociated with symptoms of hyperthyroidism is designated clinically as diffuse colloid goitre. It must not be confused with a simple goitre which includes the hyperplasias of the gland, which is frequently seen at puberty, or in the adolescent. These occur more commonly in certain districts, among which the region of the Great lakes is one of the most important in this country. As a rule in simple hyperplasia there is a diffuse enlargement affecting equally all its parts. The gland increases in size during menstruation and pregnancy. Treatment is usually sought, because of disfigurement of the neck. Diagnosis is easy. A colloid goitre presents usually only symptoms due to resultant pressure of the surrounding structures. Usually you have a uniform enlargement of the entire gland, or one lobe may be much more enlarged then the other. The muscles covering the growth may become greatly stretched and atrophied, and if the goitre is of great size, the superficial muscles may not be sufficient to support it so that it may descend from its own and become almost pendulous. The trachea may be flattened from side to side, or it may

be compressed and displaced to the side. As a result the patient has difficulty in breathing with a resulting inspiratory stridor. A persistent irritating cough may be present, due to irritation or pressure on the recurrent laryngeal nerve. A frequent symptom is wheezing, due to pressure on the trachea. If the esophagus is pressed upon, dysphagia is the result. Sometimes an enlargement of the lower portion of either lateral lobe or isthmus may descend within the thoracic cavity and form the complication—intrathoracic goitre. This happened in two of our cases, but to a moderate degree. A degree of this group of cases were associated with psychoneurosis and disordered action of the heart. Whenever the above symptoms are present, operation is advised, although Mayo and Bothby believe these cases should not be operated upon, unless there is an increase in basal metabolism. In our thirty-five cases there were no deaths.

An adenoma or adenomatous enlargement of the thyroid gland, which is not causing constitutional symptoms and is not altering the concentration or characteristics of the thyroxin in the body, is classified as adenomatous goitre without hyperthyroidism. There were twenty-one cases in our series, thirteen being pure colloid adenoma and eight fatal and mixed adenoma. The enlargement of the gland is nodular in character. The nodules may be single or multiple and vary greatly in size. They can readily be differentiated on palpation, by the fact that they usually are harder in consistency than other portions of the gland. Sometimes they become cystic and then they are quite soft in consistency. In this type of adenoma, the symptoms are usually those of colloid goitre, that is symptoms resulting from compression of surrounding structures. In this group there were no deaths. The Mayos operated on six hundred and thirty-three such cases in 1922 with one death, a percentage of 0.15. Deaths in this group should be regarded by the surgeon as due to unnecessary handling of the trachea or recurrent laryngeal nerve, causing pulmonary infection.

Adenomatous goitre with hyperthyrodism occurred in forty-five cases. It may be defined as a constitutional disease, which, by maintaining an abnormally high and unregulated concentration of thyroxin in the body, causes an increased basal metabolic rate with resulting secondary manifestations. The disease differs from exophthalmic goitre and it is important surgically to recognize this fact, because patients even with intense hyperthyroidism from adenamatous goitre almost never die from the acute typical thyroid crisis so common in exophthalmic goitre. Cardiac disturbances in the form of arrythmia and myocardial changes, accompany this type. In our cases at least twenty-four patients showed definite myocardial symptoms. Out of forty-five cases operated upon, two patients died, eight and sixteen hours after operation, from acute cardiac dilatation. One had a huge adenoma involving both lobes, was forty-three years of age and had had goitre for fifteen years. Basal metabolism could not be obtained by Dr. White, due to extreme nervousness of patient although several attempts were made. She was rested for one month before operation. The Mayos operated upon two hundred and one patients of this class with a mortality of 3.48 per cent in 1922.

There were thirty-two exophthalmic goitres in this series of our cases. Exophthalmic goitre is a constitutional disease, apparently due to an excessive, probably an abnormal, secretion of an enlarged thyroid gland, showing pathologically diffuse parenchymatous hypertrophy and hyperplasia. It is characterized by first prominence of enlarged thyroid or struma, second exophthalmos, third by tremor, fourth tachycardia, fifth increased basal metabolism, and sixth a tendency to gastro-intestinal crisis of vomiting and diarrhoea. We do not know the cause of the altered pathological condition and activity of the thyroid gland. The thyroid usually shows a symmetric enlargement, although in a few of our cases there was not very much increase in the size of the gland. Physical examination is misleading, as at operation, large glands were found. Some times the gland feels granular and at other times soft, almost cystic. The gland may show an expansile pulsation. A systolic murmur may be heard. A thrill may be felt. The eye signs are most characteristic, such as the staring expression, the exophthalmos

usually bilateral but occasionally unilateral, the lagging of the upper eye lid on looking down (von Graeffe's sign), the widened eye slits (Dalrymple's sign), the infrequent winking (Stallwag's sign), and the decreased divergence (Moebius). Flushing, moist skin, dermatographia, nervousness, apprehension, muscular weakness, loss of weight and insomnia are other symptoms. Of thirty-two cases operated upon, there were no deaths. Four cases had definite cardiac and valvular diseases,—as acute regurgitation or mitral insufficiency. They showed marked improvement after operation. The Mayos operated upon six hundred and thirty-three exophthalmic goitres in 1922 with eleven deaths, a percentage of 1.74 per cent. It is interesting to note that six of eleven deaths followed ligation. Thyroidectomy mortality was 96 per cent. Plummer claims the use of iodine in the treatment before operation and Pemberton and Sistrunk claim the improvement in surgical technique has brought about this amazingly low death rate.

There were two cases of malignancy of the thyroid in our cases. One occurred in a patient aged forty-five who was operated upon and is still living two years after operation. The other case occurred in a woman aged fifty-five, who was kept under observation for thirty-five days before operation. She died twenty-four hours after operation, evidently from acute cardiac dilatation. The most important malignant tumors of the thyroid are the carcinomata. They are found much more frequently than the sarcomata. Malignant tumors of the thyroid invade the capsule, so that it becomes adherent to the surrounding structures. The trachea and esophagus may be invaded and compressed. The carotid artery may be displaced and the carotid sheath may become adherent to the tumor mass. Thrombosis often occurs, due to invasion of the veins and arteries. Metastasis may occur in any organ. A malignant tumor of the thyroid should always be suspected when a goitre begins to enlarge quite rapidly, especially if it is painful and is adherent to the surrounding skin. Interference with deglutition and difficulty in breathing are caused by pressure on the trachea and esophagus. The voice is hoarse and there may be aphonia. Edema and cyanosis of the face may occur, due to pressure of the veins of the neck. If the sympathetic nerve is compressed, there may be slight exophthalmos, miosis or loss of pupil reaction. The patient usualy shows rapid emaciation and cachexia. Death occurs from exhaustion or from pneumonia.

At the Mayo Clinic, from January, 1901 to January, 1921, there were two hundred and ninety patients with malignant tumors of the thyroid gland,—sixty-two were carcinoma, nineteen sarcoma, one hundred and two malignant adenoma. Of the sarcomas, most died sixteen months after operation, two lived six years after operation. The mortality is practically 100 per cent. Of sixty-two with carcinoma twenty-two are alive with no recurrence. Only thirty-seven of the sixty-two have been cured for more than five years. Thirty-nine per cent of the malignant adenoma patients are alive for five years or more. If these tumors, no matter what type, are encapsulated, the chance for cure is much better. X-Ray and radium should be used in conjunction with surgery in the treatment of these tumors.

SURGERY VS. X-RAY IN THE TREATMENT OF HYPERTHYROIDISM.

Many physicians and surgeons, as well as roentgenologists have assigned increasing importance to the use of the X-ray in the treatment of hyperthyroidism. Means and Holmes, claim that two-thirds of their patients with exophthalmic goitre show either recovery or improvement coincident with the treatment. The other one-third neither improve nor grow worse. They claim if a patient is not made better he is at least a better operative risk after X-Ray treatment. In toxic adenomas they have had little success. They admit surgery is the only choice. Crile and the Mayos are not so enthused with the result of X-Ray treatment in exophthalmic goitre. They claim in their experience, the results of X-Ray treatment are only temporary, that results are delayed, beneficial results are not obtained before a month and

that in the more serious cases the excitement and mobilization incident to X-Ray treatment usually offset whatever early benefits may be received. C. H. Mayo in a recent article said that with X-Ray treatment remissions may occur, just as remissions secur without treatment, or with several other methods of treatment. His experience has been failure or temporary relief. It is also possible that the X-Ray treatment may destroy the gland and produce hypothyroidism. It is difficult to regulate the dosage and its use adds to the difficulties of operation. The radiologist claims he has no mortality. The Mayos' surgery mortality was .96 per cent in six hundred and thirty-three operations for oxophthalmic goitre. Crile performed four hundred and seven consecutive operations for exophthalmic goitre without adeath in unselected cases. These men claim a goodly number of patients with exophthalmic goitre die while taking X-Ray treatments or in the interim.

MEDICAL TREATMENT FOR GOITRE.

A surgeon might think that because all goitres which come under his treatment have more or less failed to respond to medical treatment that the latter is of no avail. This would be erroneous. As a matter of fact, a large proportion of goitres which are cured either spontaneously or by medical means, never come under the observation of the surgeon. They have recovered under dietetic, hygienic and medical treatment. Medical treatment has its own field and no conscientious surgeon will deny that there is a certain category of goitres which are purely medical, and on the other hand no honest and learned internist will refuse to admit that there is a class of goitres which are purely surgical. Medical treatment is especially successful in the parenchymatous forms of thyroid hyperplasia seen at time of puberty, pregnancy and at the time of monopause. A diffuse colloid goitre when not too far advanced, may be influenced by iodine or thyroid extract. Medical treatment is useless, however, in large colloid and nodular goitres. Every goitre causing pressure symptoms, and those which grow rapidly need surgical interference. For Graves' disease there is no well defined classical, efficient, specific, therapeutic line of conduct to be followed. Over three hundred drugs are recommended in the literature. White in one hundred and eight cases treated medically, had twenty-one deaths, sixty-one cures, twenty-one improved and five unaffected. von Graeffe's mortality was 12 per cent founded on nine hundred cases. Kocher in 1910 treated one hundred cases medically, and one hundred cases surgically. Of the medical cases 22 per cent had to be operated eventually—27 per cent were improved, 33 per cent unaffected, 18 per cent cured and 22 per cent died. Of the surgical cases, 80 per cent were cured. The death rate was 4.83 per cent. He stopped medical treatment from that time on.

SUMMARY.

1. Thyroid surgery is practically as safe a risk as any other operation today, provided the cases are properly and accurately studied and classified by accurate basal metabolism before operation.

2. X-Ray treatment has not so far been satisfactory, according to most authorities.

3. Medical treatment is mainly of use in simple or endemic goitre. In the other diseases of the thyroid it is a valuable adjunct in preparation of patients for operative procedures.

BIBLIOGRAPHY.

Berry, James; London: Diseases of the Thyroid Gland.

Crile, George: Clinics on the Thyroid Gland.

Crotti, Andre, M. D., F. A. C. S., LL.D: Thyroid and Thymus.

De Quebain, F.: Mortality in Operations for Goitre. J. A. M. A., 82-725, March 1, 1924.

Herbst, Wm. P., Jr., M. D., Rochester, Minn: Malignant Tumors of the Thyroid. International Abstract of Surgery, May, 1924.

Mayo and Bothby: Mortality Rate Following Operations of Thyroid Gland. J. A. M. A., vol. 80-891.

Means and Holmes, Boston: Further Observation on Roentgen Ray Treatment of Toxic Goitre. Archives. International Medicine, 31:303-341.

Ochsner and Thompson, University of Illinois: Thyroid and Parathyroid.

Wilson, Louis B., Division of Pathology; Mayo Clinic: Pathological Classifications of Lesions of the Thyroid Gland.

MEDICAL ASPECTS OF THYROID DISEASES *

By DAVID A. TUCKER, JR., A. M., M. D.
Cincinnati, Ohio.

THE purpose of the present paper is to review briefly the medical aspects of thyroid diseases. It will, however, be pertinent to mention certain facts, concerning the physiology of the thyroid gland, that have definite bearing upon the clinical features of these conditions.

The most essential facts relating to the physiology of the thyroid gland are those which have to do with the effect upon metabolism and may be summarized as follows:

(1) The gland secretes a colloid material within the acini.

(2) Iodine is stored in the colloid and is essential to the elaboration of the active agent (thyroxin), which influences metabolism.

(3) Thyroxin has been isolated as a definite chemical compound.

(a) It acts either directly or indirectly in the cells throughout the body.

(b) In Plummer's words—"It hastens the rate of formation of a quantam of potential energy available for transformation on excitation of the cell."

Kendall estimates that the amount of thyroxin in the tissues (exclusive of the thyroid gland) is 14 mg., and that there is a daily loss of ½ to 1 mg. Plummer states that a shift in the thyroxin of 1 mg. in the tissues of the body will change the metabolic rate 2 or 3 per cent, but that the addition of 3 mg. per day intravenously will in the normal individual increase the rate by 50 per cent.

The effect upon the calorigenic function is not immediate. If a myxedematous patient be given a single intravenous injection of 15 mg. thyroxin, a rise in metabolic rate will occur in 10 hours; the maximum reaction will be noted in about 10 days; but the effect may persist for 6 to 10 weeks. The exact mode of action of thyroxin is uncertain though it behaves in essential respects like a chemical catalyst.

In our present state of knowledge it must be recognized that any classification of thyroid diseases is only tentative. The one proposed by Plummer is perhaps the most satisfactory since it represents an attempt to correlate the structural, functional etiologic and clinical characteristics. He lists nine classes, namely:

(1) Diffuse colloid goiter.
(2) Adenomatous goiter without hyperthyroidism.
(3) Adenomatous goiter with hyperthyroidism.
(4) Exophthalmic goiter.
(5) Myxedema.
(6) Cretinism.
(7) Childhood myxedema.
(8) Thyroiditis.
(9) Malignant disease of the thyroid.

Diffuse Colloid Goiter. This type is a diffuse, more or less symmetric, enlargement, occurring usually in the young adult, characterized pathologically by an increase in the colloid material of the acini and not productive of the so-called "hyperthyroid symptoms." Its greatest incidence rate is in the "goiter belts." A recent examination of some 47,000 school children in Cincinnati demonstrated that 33 per cent had some degree of thyroid enlargement.

Except in rare cases involving massive enlargement, or those causing symptoms by mechanical pressure requiring early relief, the condition is purely a medical one. Both the prophylaxis and treatment consists in the administration of iodine. It is estimated that the human iodine requirement is not less than 300 mg. per year. Various methods

*Read before the Cabell County Medical Society, Huntington, W. Va., November 26, 1925.

of supplying this amount have been proposed; among which may be mentioned the following:

(1) Addition of iodine to table salt in the proportions of 1 part to 500.

(2) Addition of iodine to the municipal water supply.

(3) Administration of 10 mg. of iodine per week to school children.

The diffuse colloid goiter may be present in an individual suffering from a psychoneurosis, effort syndrome or disordered action of the heart and may then be wrongly diagnosed as mild exophthalmic goiter, unless careful clinical observations are made, checked by basal metabolic rate determinations. This goiter has a normal or at times slightly subnormal basal rate.

The importance of the prophylactic administration of iodine to children lies in the fact that nearly all adenomatous goiters have their inception in the colloid type.

Adenomatous Goiter Without Hyperthyroidism. This type may require intervention on account of mechanical pressure, or for cosmetic reasons. The primary treatment is surgical and requires the removal of the adenomatous masses. In most cases there is also an excessive colloid deposit which should be reduced by the administration of iodine after the operative procedure and not before, since experience has shown that these goiters are likely to become "hyperthyroid" if treated with iodine while adenomatous tissue is still present.

Adenomatous Goiter With Hyperthyroidism. This condition appears to be a constitutional disease produced by either overfunctioning adenomatous tissue, which maintains an increased metabolic rate, with resulting secondary manifestations; or else by the overfunctioning of normal tissue due to some influence of the adenomatous tissue. It seems to be clinically identical with the condition which can be produced by excessive administration of the thyroid gland or of thyroxin. The treatment is surgical.

Exophthalmic Goitre, Grave's, or Basedow's Disease. This disease has been the subject of much controversy both with respect to its etiology and its treatment. Since the work of Mobus in 1886, it has generally been ascribed to an abnormally increased activity of the thyroid gland. Recent studies indicate clearly, however, that the condition is not merely one of hyperthyroidism since neither the administration of thyroid gland, nor of thyroxin, will produce a state exactly like that seen in the disease.

Pathologically, the gland usually shows both a diffuse parenchymatous hypertrophy and hyperplasia. Ordinarily it contains little or no iodine.

The symptomatology is well known, and includes besides the goiter, tachycardia, exophthalmos and other eye signs, fine tremor of the fingers, accelerated metabolism, functional nervous symptoms, and often digestive disturbances.

The Medical Treatment of Graves' Disease consists in the following:

(1) Physical and Mental Rest.

(2) Dietary measures to reduce the specific calorigenic action of food.

(3) Removal of all foci of infection.

(4) Cold application over heart and thyroid.

(5) Use of pharmacotherapeutic measures to control symptoms and to slow the rate of metabolism (namely quinine hydrobromide, ergotin, arsenic, bromides, veronal).

(6) Psycho-therapeutic influences.

(7) Decreasing activity of thyroid by use of X-Ray, radium, or of both.

(8) Administration of iodine.

The economic and social status of an individual suffering from this disease conditions to a large extent the results to be obtained from medical treatment. Surgical treatment will often give quicker relief than medical measures and this must be considered.

The use of iodine in the treatment of Graves' Disease was advocated by Trouseau in 1863, who noted marked improvement in a case where he administered iodine by mistake instead of digitalis which he had intended to prescribe. In 1920, McCarrison, and in 1921, Mellanbry, noted that the thyroid gland in animals assumed a hyperplastic condition, resembling the histological picture of exophthalmic goiter when fed on a

high fat iodine free diet. In 1923, Plummer studied the effect of iodine administration in some 600 cases of the disease. He reported that approximately 2/3 of the patients were greatly benefitted; 1/4 slightly benefitted and about 1/20 were unaffected. The improvement in clinical symptoms usually occurred promptly, and was accompanied by a lowered metabolic rate. The most striking results were seen in the use of iodine in the "crisis" of the disease, patients being brought out of an apparently moribund condition in 24 hours. It is interesting to note that Hyman has reported similar startling results in patients apparently about to succumb during a severe crisis, by the intravenous injection of 5 mg. of thyroxin.

Iodine is usually given as Lugol's solution, the dose varying from 5 to 10 drops three times daily. The Mayo Clinic now uses this method as a routine in both pre- and post-operative treatment, and since its introduction there has been a lowering of both medical and surgical mortality. The ultimate effect of iodine administration upon the course of the disease is as yet undetermined, but it is to be hoped that further studies will show a permanency in the beneficial results.

A study of the literature and my own limited personal observations gives ground for the following conclusions:

(1) Many patients will recover under medical treatment particularly if the attack is mild.

(2) Others do not do sufficiently well under medical measures and should have the benefit of surgical treatment.

(3) It is always wise to give medical measures an adequate trial, bearing in mind that surgical intervention should not be postponed until such a time as irreparable damage is done to the heart.

(4) Only about 70 per cent of these cases operated upon can be considered clinically cured, and in these cases there are many residual features of the disease that remain.

Myxedema. Falta defines "myxedema as a condition resulting from the absence or insufficiency of the function of the thyroid gland in the adult organism; it is characterized by the diminution of all vital processes and by certain trophic manifestations. The diminution affects the vegetative functions as well as the psychic life. There is found slowing of the entire metabolism and diminution of the excitability of the whole vegetative nervous system. The trophic disturbances affect especially the ectodermal tissues, skin, nails and teeth, altho almost all organs may show regressive metamorphosis especially the vascular system, which tends to be the seat of a premature arterio-sclerosis."

In severe types the basal metabolic rate falls to the level noted when the thyroid gland is completely extirpated, namely 40 or 60 per cent of the normal rate. Ordinarily the edema seen in this disease becomes noticeable when the metabolic rate has fallen to 15 or 17. At this point the edema may be somewhat transient, disappearing on rest to reappear after severe exercise.

The treatment of myxedema consists in the continued administration of the thyroid gland or of thyroxin. In the absence of an ability to elaborate thyroxin, iodine administration produces no beneficial results. 15 mg. of thyroxin given intravenously will bring the basal metabolic rate of myxedematous patients to normal limits. To maintain this level 0.8 mg. to 2 mg. per day by mouth are required.

Cretinism. This condition appears to result from a hypothyrosis or athyrosis occurring in infancy and in addition to other symptoms presents evidence of growth and developmental disturbances. Unfortunately the treatment with thyroid or thyroxin does not produce such marked results as is seen in myxedema, often physical improvement is not paralleled by mental or psychic change.

Thyroiditis. Occurring as an infective condition of the gland it may accompany infectious fevers of any sort, namely: scarlet fever, typhoid, smallpox, malaria, etc. The primary form of acute thyroiditis which does not result in suppuration may stimulate Graves' disease, altho the local symptoms, such as pain are more marked and evidences of infection (fever) are present. The onset is sudden, and the termination occurs usually by lysis. Unless fluctuation is noted in the gland surgical treatment is not indicated. Quinine and salecylates are said to be effective in this condition.

Malignancies of the thyroid are surgical; medical treatment is unavailing and should consist only in symptomatic relief until a diagnosis is made and surgical intervention secured.

SUMMARY.

The thyroid gland may be the subject of disease which produces local symptoms; or it may be the subject of disease, the principal symptoms of which are due to some alteration of the internal secretory function.

In the first class belongs:

(1) Malignant Tumors.

(2) Inflammations.

(3) Certain goiters namely:

Diffuse Colloid goiter; Adenomatous goiter, without hyperthyrodisim.

In the second class belong:

(1) Hypothyroid states, namely: Myxedema and Cretinism.

(2) Hyperthyroid states, namely: Adenomatous goiter with hyperthyroidism.

(3) Exophthalmic Goiter, probably a dysthyroid state or else a hyperthyroid state plus a disease of the autonomic nervous system.

It is required of the internist that he recognize the various conditions, institute medical measures when required, and promptly advise surgical treatment when it is necessary, or when it is likely to be most effective in restoring the greatest degree of health.

GALL BLADDER DISEASE*

By JOHN E. CANNADY, M. D.
Charleston, W. Va.

IN certain individuals, a chronic type of infection, (blood borne or otherwise), sets up in the gall-bladder and eventually results in the formation of calculi. This disease process may extend to the common and hepatic ducts, even to the finer branches of the latter. Gall-bladder disease is more frequently seen in women, also following typhoid fever, or after pregnancy, also the incidence is greater in those who lead sedentary lives. People generally, who habitually perform ardous, physical labor seldom ever suffer from gall stones. The work of the average coal miner, that of loading coal, is incidental to a great deal of vigorous physical exercise, and as a result, gall-bladder disease is rather seldom seen in coal loaders.

The pathological entity commonly known as gall-bladder disease often comprises far more than the gall-bladder or bile ducts, the entire biliary system, also portions of the pancreas may be included in the disease complex. As time goes on, the constitutional effects are more and more pronounced.

It has been quite generally agreed among the physiologists that the gall-bladder is not a reservoir for bile, but rather that its function is that of absorbing some of the constituents of the bile and the concentration of that fluid.

Lyon's idea of drainage of the gall-bladder by the use of the duodenal tube and magnesium sulphate solution is, I think, conceded by most observers to be as fallacious in the human being as it has been demonstrated to be by laboratory tests on animals. The patient secures a free evacuation of the bowels and feels better for the time being. Byron said, "Nothing clears the mind like a dose of salts." It is not generally believed that the presence of the gall-bladder is necessary to health and that like the appendix, the individual is not much, if at all, inconvenienced by its absence.

We have seen from time to time relatively quiescent types of gall-bladder disease in which the patient is not aware of any particular discomfort in the abdomen. Yet, after undergoing operation and having the gall stones or offending gall-bladder removed,

*Read before the section on Surgery, West Virginia State Medical Association, Bluefield, June 10, 1925.

these patients express a great sense of relief, and on close questioning will admit that they did have numerous attacks of indigestion and did have a considerable amount of discomfort in the gall-bladder region.

Cholecystrograms made after the methods devised by Graham give much help in diagnosis, and blood chemistry is of great value, not only in estimating the patient's resistance, but in giving a key to the proper treatment.

Whether to drain or not, following cholecystectomy is still a debated point. The number of surgeons however, who treat the gall-bladder on the same general basis as the appendix, is increasing. My experience and that of some of my associates covering over 300 cases, in which the gall-bladder has been removed and the incision closed without drainage, have convinced us very thoroughly that it is not necessary to institute drainage after the average cholecystectomy. In some recent cases, I have even dispensed with drainage following the removal of an unruptured pus gall-bladder. The cystic duct was divided with the cautery and there were not at any time indications of intraperitoneal infection subsequent to the operation. Dr. Murat Willis has advocated dispensing with drainage for several years and he is most enthusiastic about it. This method has been given a thorough tryout, I understand, by Dr. Judd at the Mayo Clinic and many others. Locally, Dr. Buford, of Charleston, has made extensive use of this method and has been very much pleased with it. Some have said they were afraid the bile pressure might start a leakage. The pressure in the common duct is much less than in the cecum. If the stump of the appendix can take care of itself, why not the cystic duct?

Many surgeons have argued that inasmuch as bile drainage appeared in nearly all of the cases in which they used drainage, that they leaked and therefore should be drained. In my opinion, the presence of the drain causing foreign body irritation and chemotaxis is responsible for the leakage. Relative to the dangers of leakage after cholecystectomy and the closure of the operation wound without drainage, a slight leakage of bile does not necessarily mean disaster, as witness the following:

The injection of small quantities of human bile (25 to 60 c. c.), into the peritoneal cavity of guinea pigs does not cause apparent disturbance—the pigs remain active, do not lose weight, and appear very healthy. Without doubt, free bile causes some irritation.

The ligation and amputation of the cystic duct calls for extreme care in order that we may avoid injury to the common duct. In my series of cases, I have once seriously injured the common duct. The inflamed cystic duct is often folded down on the common duct in a spiral or "S" shape. After separating the adhesions it can be straightened out so that the removal is more safely done.

Ideal Cholecystotomy. There is an occasional case in which there are few symptoms, the gall-bladder is apparently healthy, and there is but one smooth, round gall stone. In such a case, we may sometimes feel that the removal of the gall-bladder is unnecessary, and that merely opening the gall-bladder and removing the stone will bring about the desired results. The gall-bladder responds very well to this form of treatment which I think may be justifiable at times. However, I have recently had occasion to open a gall bladder in which this operation had been done a few years before. There were three stones present instead of the single stone which was removed the first time, and owing to such a manifest tendency to recurrence, it was thought best to remove the gall-bladder.

Peritonization after cholecystectomy is most important and while in many cases parietal peritoneum can be sutured over the raw liver surface, there are cases in which it may be necessary to make use of a portion of the omentum for this purpose. In certain cases of obstruction of the common duct, as an emergency measure at least, it may be expedient to drain the gall-bladder into the pyloric end of the stomach or into the duodenum or jejunum. The results are usually quite satisfactory. Again, occasionally, it is feasible to anastomose a chronic discharging biliary sinus into the stomach. In anastomosing the gall-bladder to the stomach, it may be advisable in some cases to make use of the Murphy button as a time saving

procedure. In one such case in which the patient was badly jaundiced and in very poor condition, the Murphy button was made use of but, as sometimes happens in such cases, it failed to pass and still reposes in the gall-bladder. The convalescence in this case was satisfactory, the jaundice cleared up rapidly, and there was freedom from pain. When last heard from, this patient was in good condition.

There are certain cases in which the surgeon is often in a quandary as to what is the best thing to do. The patient has typical gall-bladder symptoms, undergoes operation, nothing is found but a tightly distended gall-bladder with a number of apparently old adhesions over its fundus and sides. It is my belief that in many such cases, cholecystectomy is advisable and often gives the desired relief. It is an unfortunate fact that surgical attacks for gall-bladder disease do not always bring about a cure. The best figures available on that subject I believe indicate that the percentage of expectancy of cure after cholecystectomy is about 70 per cent, whereas after drainage of the gall-bladder, it is 35 to 40 per cent. The gall-bladder itself is a nice surgical landmark and very useful for purposes of drainage or for anastomoses in event that the common duct becomes seriously obstructed, and this fact seems to me to be one of the best arguments for leaving a diseased gall-bladder in situ. It was formerly argued that drainage in itself brought about a cure and that the diseased gall-bladder became by virtue of this agency, restored to normal. This line of reasoning, has, I think, died a natural death. Of course, in the poor risk cases, the operative hazards are less with drainage of the gall-bladder.

Hepatitis is present in practically all cases of gall-bladder disease in varying degrees. It may be the prelude of liver or portal cirrhosis.

Hepatic insufficiency is the occasional cause of death following gall-bladder operations. The patient, twenty-four hours post operative, develops circulatory failure, has a cold, clammy looking skin. Treat with intravenous glucose every four or six hours and give tap water by rectum.

Judd has wisely said, "It would seem that there should be no deaths following operations for chronic disease of the gall-bladder, yet it is very unlikely that we shall ever be able to operate in a very large series of cases without some serious consequences."

Crile remarks, "Cholecystectomy according to statistics would seem to be safer operation, but this is due to the fact that cholecystostomy is used in the bad risk cases. I consider of special importance the strict individualization of the patient, the restoration and maintenance of the internal respiration of the cells, gradual decompression only in extreme cases, special precautions against infection.

"The criterion for choice between cholecystectomy and cholecystotomy is the condition of the patient."

I have briefly tabulated my own personal experience with gall-bladder surgery:

Total number of gall-bladder cases operated upon	524
Cholecystectomies	321
Number of deaths	21
Percentage of Deaths—6.54 Per Cent	
Cholecystostomies	199
Number of deaths	8
Percentage of Deaths—4.02 Per Cent	
Ideal cholecystotomies	4
No Deaths.	

The earlier cases were handled mostly under ether anesthesia. During the past two years most cases have been operated under ethylene anesthesia. Improved methods of treatment have reduced the post operative complications and mortality considerably so that the cases treated during the past few years make a much better showing than the earlier ones.

In several of the leading clinics of the country at the present time, the operative mortality of gall-bladder operations varies from 4 per cent to 7 per cent. The mortality in common duct operations varies usually from 10 per cent to 20 per cent.

* * * * * *

(1) JUDD: Annals of Surgery, Vol. LXXVIII, No. 2, August 1923, Page 199.
(2) CRILE: Annals of Surgery, Vol. LXXVIII, No. 2, August 1923, Page 191.
(3) DEAVER: Transactions Southern Surgical Ass'n., Vol. XXXVII, Page 128.
(4) MAYO: Transactions Southern Surgical Ass'n., Vol. XXXVII, Page 136.
(5) HEYD: S. G. O., Vol. XXXIX, No. 1, Page 66.

PREPARATION OF THE PATIENT FOR PROSTATECTOMY

Bumpus, of the Mayo Clinic (S. G. O., Jan. 1926) treats this subject under four headings: (1) the duration and amount of obstruction; (2) the indications for and against cystoscopy; (3) the care and treatment of associated infections; (4) the restoration of renal function to a point compatible with major surgical measures.

The duration of the obstruction is determined partly by the history of the patient. Cystography, however, gives more complete and reliable information. The amount of obstruction is determined by the amount of residual urine. The author advises intermittent catheterization for at least ten days when the amount of residual is less than 120 cc., and gradual decompression with the indwelling catheter if it is greater.

Bumpus does not favor routine cystoscopy in cases of prostatic obstruction. His indication for this examination is the presence of symptoms out of proportion to the findings given by rectal palpation and cystography. These cases usually fall into three groups: paralysis of the bladder musculature, enlargement confined to the median lobe, and infection of the prostate. It is interesting to note that for the latter two conditions he is using the prostatic punch. The author also states that the punch has been used on one-third of his recent series of prostatic obstruction cases.

Associated infection is mostly pyelonephritis. This is attributed to absorption from the prostatic urethra. While occasionally fatal, it is for the most part a self limited process of three or four days duration. In treatment most of the popular intravenous antiseptics have been used. The author gives intravenous hexemethylenamin the preference. Mercurochrome has at times given brilliant results. Hexyl resorcinol is not mentioned nor are epididymitis and vesiculitis.

Restoration of impaired renal function is the main part of the paper. This Bumpus effects through the use of the apparatus described by Van Zwaluenburg and later by himself. By this method the bladder is usually emptied in three or four days. Careful checking up of the urinary output and of the blood urea are essential. Bumpus insists upon a minimal daily output of 2500 cc, and when this is not obtained he used daily intravenous infusions of 1000 cc, normal saline solution. Hot packs, with or without aspirin or pilocarpine are also used. Under this regime the blood ursa falls more or less rapidly. The author warns against even cystostomy when the blood urea is greater than 100 mg. per 100 cc of blood. Ideal result is a blood urea of 40 mg. and a one stage prostatectomy.

(Note:—Elderly patients with decompression apparatus in place may get irrational at times and disconnect the catherer from the rest of the apparatus. When this happens there results just that condition which is most dangerous—a rapid, complete emptying of the bladder. Two deaths have occurred on our service from this cause. Close supervision is imperative.)

IRWIN.

The Sugar Treatment of Epilepsy

Wladyczko, a neurologist of Warsaw, refers to the claim that in epilepsy there is a lessened content of blood sugar both under ordinary conditions and under the provocative exhibition of extra diet sugar. He believes that if this lowered sugar content is not the leading cause of the seizures it is at least a contributory factor. Apparently, however, he would not exhibit the sugar without formal blood control; but with reduced content he would give sugar even if the patient were under treatment with the ordinary drugs. He mentions 23 cases in which he gave the treatment with improved spacing of the fits and five more in which the degree of improvement was striking. Sugar may be given in any way so long as the patient receives at least 20 grams daily—in tablets, syrup, or even in the form of the sweet fruits—figs, dates, etc. Tests should show that the hypoglycemia is brought up to the normal by the ingested sugar.—*La Presse Medicale*, November 7, 1925.

THE WEST VIRGINIA MEDICAL JOURNAL

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS

J. HOWARD ANDERSON, Marytown — WALTER E. VEST, Huntington — CHARLES W. WADDELL, Fairmont — HARRY M. HALL, Wheeling

THE JOURNAL issued on the first of each month. Entered as second-class matter, January 1, 1926. Acceptants for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Authorized July 24, 1919.

Subscription to Members ..... $2.00 Per Year
Subscription to Non-Members ..... $3.50 Per Year
Single Copies ..... 35 Cents

OFFICERS

President:
J. R. BLOSS ..... Huntington

First Vice-President:
R. O. ROGERS ..... Bluefield

Second Vice-President:
H. C. SKAGGS ..... Montgomery

Third Vice-President:
D. A. MACGREGOR ..... Wheeling

Treasurer:
HUGH G. NICHOLSON ..... Charleston

Executive Secretary:
MR. STERRETT O. NEALE ..... Charleston

Delegate to A. M. A., 1926:
J. R. BLOSS ..... Huntington
C. R. OGDEN, *Alternate* ..... Clarksburg

Delegate to A. M. A., 1926-27:
H. P. LINSZ ..... Wheeling
R. A. ASHWORTH, *Alternate* ..... Moundsville

COUNCILORS

First District:
H. P. LINSZ, (1-year term) ..... Wheeling
C. G. MORGAN, (2-year term) ..... Moundsville

Second District:
C. H. MAXWELL, (1-year term) ..... Morgantown
C. H. HALL, (2-year term), ... Elkins

Third District:
JOHN FOLK, (1-year term) ..... Bridgeport
C. R. OGDEN, (2-year term) ..... Clarksburg

Fourth District:
J. E. RADER, (1-year term) ..... Huntington
W. E. VEST, (2-year term) ..... Huntington

Fifth District:
J. H. ANDERSON, (1-year term) ..... Marytown
H. G. STEELE, (2-year term) ..... Bluefield

Sixth District:
R. H. DUNN, (1-year term) ..... South Charleston
C. A. RAY, (2-year term) ..... Charleston

¶ All original articles for THE JOURNAL must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

¶ Our readers are requested to send marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

¶ It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

¶ Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

¶ Advertising forms will go to press not later than the tenth of each month. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

¶ Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, 211 Smallridge Building, Charleston, W. Va.

STANDING COMMITTEES

Medical Defense Committee

H. P. Linsz, Wheeling; C. R. Ogden, Clarksburg; C. G. Morgan, Moundsville.

Committee on Scientific Work

G. H. Barksdale, Charleston; O. D. Barker, Parkersburg; D. A. MacGregor, Wheeling, Scientific Secretary.

Public Policy and Legislative Committee

C. A. Ray, Charleston; G. A. MacQueen, Charleston, R. H. Walker, Charleston; James McClung, Richwood; J. R. Bloss, Huntington; D. A. MacGregor, Wheeling.

Committee on Hospitals

Robert J. Reed, Wheeling; B. H. Swint, Charleston; R. J. Wilkinson, Huntington.

Committee on Professional Relations

J. R. Shultz, Charleston, chairman, (3-year term); H. G. Nicholson, Charleston, (1-year term); H. R. Johnson, Fairmont, (2-year term); A. G. Rutherford, Welch, (4-year term); W. R. Goff, Parkersburg, (5-year term).

Surgical Section

E. Bennette Henson, Charleston, chairman; W. R. Goff, Parkersburg, secretary.

Eye, Ear, Nose and Throat Section

T. W. Moore, Huntington, chairman; R. A. Tomassene, Wheeling, secretary.

Woman's Auxiliary Officers

President, Mrs. A. G. Rutherford, Welch; *First Vice President*, Mrs. W. H. St. Clair, Bluefield; *Second Vice President*, Mrs. J. P. Lilly, Morgantown; *Secretary*, Mrs. C. M. Scott, Bluefield; *Treasurer*, Mrs. C. A. Ray, Charleston.

EDITORIAL

AVOID BEING DELINQUENT

All members whose dues have not been received by April 1 will be delinquent.

Under postal regulations, delinquent members are NOT entitled to The Journal. Accordingly, we must strike their names from the mailing list until such time as they are reinstated. Our failure to do so would result in forfeiture of our second-class mailing privileges, and, of course, we can take no chance with that possibility.

Delinquents are NOT protected by the Medical Defense fund after April 1 until such time as this fee is paid. Under the Constitution and By-Laws, any member made defendant in malpractice proceedings MUST be in good standing at the time litigation is started.

Under the Constitution and By-Laws delinquent members are not entitled to take any part in the annual meeting, their status being the same as that of non-members.

Members whose dues have not been received by April 1 will be reported delinquent to the American Medical Association and the Southern Medical Association. This is obligatory on the part of the executive secretary's office.

The foregoing has been cited for the information of all members. It is hoped that the ENTIRE membership will cooperate with Secretaries of Component Societies so that complete reports will be available before the time limit is reached.

This is going to be one of the most important years in state association history and the earnest cooperation of every ethical practitioner of medicine is desired.—The Editors.

ILLEGAL PRACTITIONERS

The time has come to call for vigorous prosecution of illegal practitioners of medicine in West Virginia.

In virtually every city in the state there are certain fake doctors and charlatans operating in defiance of law and taking advantage of easy-going health authorities, who, in their administration of the health code, seem to forget that they are the police officers in charge of enforcing the medical practice act, the chiropractic and osteopathic laws.

It is of as much importance that the state laws regulating the practice of medicine, etc., be enforced as it is to stamp out communicable disease, contagious diseases and enforce certain hygienic measures. While the charlaton goes on his merry way, much of the good that results from control of contagious diseases is offset through his ignorance and incompetency. Yet, he keeps his regular office hours, invites the sick public into his den to be "cured" and there is no concerted action to bring him to the bar of justice unless, through some freak of chance, he happens to be caught in his own web of circumstantial evidence.

The whole situation is due to the complacency with which the public and the medical profession views the activities of these fakers. It also is due to lack of foresight in years gone by. There would be no necessity for this editorial being written if the moves of the illegal practitioners had been anticipated. History should record that drugless healers, fake doctors and "cures" flourished over the land during the beginning of the second quarter of the twentieth century and it should also record that the cause for the condition was due solely to the smugness of the public and the medical profession, the latter content to sit in communion within itself and too timid to turn the floodlight of truth upon the situation.

The state department of health has instituted a "clean up" campaign in West Virginia. Letters have gone to prosecuting attorneys calling attention to violations of the medical practice act. The department has been very lenient with several of these men and women. It has offered them every opportunity to comply with the provisions of the act. They have failed to do so. They can not cry that they are being persecuted. It now is up to the prosecuting attorneys, the county and city health officers and the public at large to demand that these people who have been violating the law be prosecuted or leave the state.

There should be a sign on every highway and by-way leading into West Virginia reading:

"This state enforces its medical practice act. If you can not comply with its provisions, turn back now. Save yourself the embarrassment of being prosecuted."

Commissioner Henshaw is turning first to the prosecuting attorneys in the counties wherein lie the larger cities and towns. He is pointing out that any man or woman who treats the sick or prescribes for the ailing is guilty of violating the law unless he or she has first obtained a license from the public health council.

It is strange but the charlatan always operates in the more populous communities. There, aided by lurid advertising and claims of marvelous cures, he entices the unsuspecting sick person into his office and proceeds to give a "treatment." He is a suave individual, a smooth talker and before the patient leaves he finds he has paid for a series of "treatments." Usually he comes "back to earth" before the next "treatment" is due, fails to return and the "healer" thus is "in" some $20 to $30.

The situation in the cities is vastly different from that in the rural communities. In the centers of population, where a licensed, ethical practitioner is within call at any time during the 24 hours of a day, there can be no extenuating circumstances warranting the illegal practitioners' existence.

One seldom if ever finds the charlatan in the rural communities. One does find in sparsely settled areas, however, in this state, the old-fashioned "pill peddler" who is called in time of need because no one else is available. He is usually the old fellow, possibly the son or relative of a doctor of years gone by, who has had a smacking of medicine, possesses a stock of cathartics, etc., and is known as "Doc," wherever he goes over the

countryside. One hears of him often in Charleston when he appears before the legislature, futilely seeking a special law which would make it mandatory upon the public health council to issue a license to him.

In years gone by, these rural practitioners have been unmolested because it was considered that they did no harm with their pills and that they were better than no doctor at all. However, with the advent of good roads and the plan for organization of full-time county health units under licensed physicians in each county, the day of these old fellows is passing. Time is taking care of them.

It is the smart, high-pressure "healer" in the cities that the state department is aiming at now and Commissioner Henshaw should have the wholesouled support of every member and the public in this drive. These illegal practitioners are well-versed in the ways and means of appearing before the public as being "persecuted" and "hounded" by the "doctor's trust." One hears of them on every side. Their plaintive tales of being "dogged" from one state to another are broadcast. Usually there is a "wife and three or four small children" in the background "who will starve if papa's put in jail."

These men, and women, have no right to treat the sick unless they qualify under the law. If they can, well and good—if not, they should be forced to close up shop and like the Arabs, steal away into the night.

The law is very explicit. There can be no exceptions. It has no class or creed restrictions. It is open to all who have the necessary qualifications, regardless of color or rank. These qualifications, known as standards, were fixed for the protection of the public health and those who can not meet the requirements are guilty, if they seek to treat the sick, beyond any reasonable doubt.

—C. A. R.

CHALLENGE OF TUBERCULOSIS

The October bulletin of the West Virginia State Department of Health, a very creditable issue, is devoted entirely to tuberculosis and the measures put forward to combat this disease. An article from the pen of Dr. J. G. Pettit, superintendent at Hopemont, is especially provocative of thought. He analyzes the statistics of his institution over a period of six years and his conclusions constitute a challenge to the medical profession of the state to diagnose the great white plague earlier than has been our wont. The condition of this series of 1843 patients upon admission was classified as follows: Incipient, 13 per cent; moderately advanced, 33 per cent; far advanced, 54 per cent. Attention is directed to the fact that reducing the number of far advanced admissions to 40 per cent and increasing the incipient cases accordingly would double the service of the Sanatorium without any increase in cost.

Dr. Pettit calls attention to the need for education of both the laity and the profession along broad tuberculosis lines. He stresses the value of *symptoms* in early diagnosis and the fact that these often are present so markedly as to indicate the true condition before a physical examination will avail. One paragraph is so significant that we quote it:

"Before this institution can be of its greatest usefulness to the victims of tuberculosis, a tremendous amount of education is necessary to the end that not only the future patient, but all members of the medical profession as well, will stop minimizing for months and years the danger of a cough which does not yield to treatment, underweight, easy fatigue, persistent hoarseness, anemia, even slight elevation of temperature, persistent, or with remissions, slight blood spitting, pleuritic pains, and many other symptoms strongly suggesting active tuberculosis."

During the past year, the writer has been in very close touch with the work at Hopemont and has had ample opportunity to observe the situation there. The quality of the work done and the results obtained have been highly gratifying, and are a credit to West Virginia. If we on the skirmish lines will diagnose our cases earlier, often a difficult task, and can impress upon our patients the necessity of *early sanatorium* treatment, the results will be better in proportion to the way we acquit ourselves. Dr. Pettit's article is so full of meat that we commend it to every physician in the state.

In general terms, the prognosis in tuberculosis may be reduced to a mathematical basis with two fundamental principles; (1) the patient's chances of recovery vary inversely as the length of time elapsing between onset and diagnosis, and (2) sanatorium treatment doubles his chances of recovery. —W. E. V.

FIGHT THESE BILLS

Attention of members of the West Virginia State Medical Association is called to the editorial appearing in The Journal, A. M. A., January 23, 1926, relating to the trend of Veterans' Relief Legislation; State Medicine. The Federal government now treats, at the taxpayer's expense, persons suffering from disease and injury unrelated to any service rendered the people. Bills now are pending in Congress to increase the number of beneficiaries of this government bounty and extend the bounty so as to make it include out-patients as well as hospital treatment.

We quote in part from the editorial:

"Through paragraph 10 of Section 202, World War Veterans' Act, 1924, the Federal government planted the germs of state medicine in our body politic and entered directly into competition with the private practitioners and private hospitals of the country. Under the provisions of that paragraph the government now treats at public expense diseases and injuries having no relation to any government service, military or otherwise. Veterans of the Spanish-American War, of the Philippine insurrections, of the Boxer rebellion and of the world war, suffering from neuro-psychiatric or tuberculosis ailments or diseases, or from paralysis agitans, epidemic encephalitis or amebic dysentery or from the loss of sight of both eyes, are entitled as a matter of right to treatment and care in hospitals under the Veterans' Bureau, at government expense, whether their ailments or diseases are or are not of military origin. Veterans of any war, military occupation or military expedition since 1897 are entitled to that treatment and care whenever the director of the Veterans' Bureau finds facilities available, no matter what may be the nature of their disabilities, and no matter what may be their origin. The government pays traveling expenses incident to such treatment. Whether an applicant for treatment is rich or poor, is able to pay for treatment or belongs to the dependent classes, makes no difference, except that, in admitting patients of the latter class preference is given those financially unable to pay. The only condition the applicant must comply with is to prove illness or injury, to abandon his home physician and the hospitals of his own place of residence, and to enter a government institution, for treatment by physicians paid by the government.

"The act providing these gratuities passed June 7, 1924. During the fiscal year immediately following, July 1, 1924, to June 30, 1925, 13,243 persons claimed under it, without regard to the nature and origin of their disabilities, the privileges of government hospitals. They represented 17 per cent of the total number of patients admitted, 76,812. The duration of the stay of these 13,243 patients in the hospitals can be inferred from the fact that the average stay per patient of all patients discharged from the Veterans' Bureau hospitals during the year was 93.7 days. The average in-patient operating expense for each patient daily during the year, so far as available figures permit it to be computed, was $3.98. If, then, the 13,243 patients treated for disabilities regardless of the origin of such disabilities be regarded as average patients who stay an average time, 93.7 days, at an average cost, $3.98 a day, the expense to the taxpayers of the country of these patients while in hospitals was $4,938,659.02.

"This was exclusive of interest and depreciation on the extensive and costly hospital plant that must be maintained to render such service available; exclusive of traveling expenses of the patient hospitalized, which the government paid; and exclusive of the overhead expenses incident to the work of the Veterans' Bureau in administering and supervising these hospitals. And these figures represent only the first year's work of the bureau. As veterans become more familiar with the privileges granted, and as they become older and more subject to disability and disease, they may be expected to resort

to government hospitals in increasing numbers, with increasing frequency, and at increasing expense to the government.

"The gratuities already authorized will not mark the end of the bounties bestowed by an open-handed government at the expense of the tax-payers, if the proponents of such legislation have their way. Bills now are pending in Congress to extend to every beneficiary under section 10 of the World War Veterans' Act, 1924, outpatient treatment, in addition to the hospital treatment already authorized, and to grant the privilege of hospitalization and of outpatient treatment to Spanish-American War nurses, contract surgeons and contract dentists. Another bill proposes to extend a like privilege of hospitalization to all disabled ex-service men in the war between the states, including Confederate veterans. Another bill may be construed as entitling all civilian employes who served overseas during the World War to hospitalization at any time during the remainder of their natural lives for any disease or disability. Other bills propose to give every disabled ex-service man, including Confederate veterans, the degree of disability not being stated and regardless of the origin of such disability, not only hospital care, but medical treatment, nursing, and all necessary care. And there are other bills yet to come."

The foregoing shows that a dangerous proposition confronts the American public as well as the medical profession. There are more than four million men and women who would come within the purview of the proposed legislation. If it costs $3.98 a day for hospital care alone, exclusive of other administrative costs, imagine the great sum of money that it would be necessary for the taxpayers to pay if but one-tenth of those who would be entitled to such proposed treatment would avail themselves of it if the bills become law.

The bills can not be conceived as rewards for military service, *The Journal A. M. A.* continues. Under them, men who never came within a thousand miles of danger are rewarded on the same basis as those who lost their eye-sight or limbs in "No Man's Land."

"The struggling family of the man who gave up his life in the trenches is left to provide medical relief as best it can," *The Journal A. M. A.* points out, "for the widow and children get no hospital or medical care from this legislation. If the bounty is a reward, it must be considered then, not as a reward for service in the line of duty, but as a reward for contracting disease or incurring injury outside the service, and for abandoning home ties and becoming a dependent of the government and an inmate of a government institution; for these are the circumstances on which the reward is based and to which it is proportioned."

The medical profession in West Virginia should awaken to the dangers of the proposed legislation and immediately use every honorable means to show our representatives in Congress and the United States Senate that the bills must be defeated.

———o———

AN ACKNOWLEDGMENT

The success of *The Journal* virtually being assured under the new, publication committee plan, the editors desire to call the attention of the membership to the fact that it represents the culmination of ten long and arduous years of work on the part of our present president, James R. Bloss, of Huntington, former editor.

It will be recalled that it was upon his recommendation that the House of Delegates at Bluefield approved this new plan, and all of his suggestions have been incorporated in the larger publication that reaches you today. His guidance and suggestions, gained from the years of burning the midnight oil, have proved invaluable to members of this committee.

Congratulatory letters continue to arrive, all attesting to the progressive policies as outlined by Dr. Bloss and in all sincerity we want to say that he deserves more credit for the great work done for *The Journal* than the present staff can ever hope to merit.

Under Dr. Bloss' recommendations, five men and a paid secretary now perform the duties that Dr. Bloss and his secretary formerly performed. Candidly, we don't see how he did it. —THE EDITORS.

SHEPPARD-TOWNER

If you are not familiar with the Sheppard-Towner law, your attention is called to the following editorial from the Journal A. M. A. for Feb. 6. In particular, please note the last sentence and act accordingly. — THE EDITORS.

"The Sheppard-Towner Act will continue in force two additional years—until June 30, 1929—if two bills [1] introduced into Congress to accomplish that end are permitted to become law. Otherwise, the act will expire by a self-contained limitation, June 30, 1927. The proposed continuance of federal domination over health matters in which the state is constitutionally supreme is in itself pernicious. The proposal is, moreover, astutely timed to force on Congress at the very threshold of the next presidential campaign the question of making the system permanent. It will be remembered that the original proposal was also incorporated as a plank in the platforms of both leading political parties. The proponents of the Sheppard Towner scheme are apt to brush aside facts and figures by an emotional appeal on behalf of mothers and babies. Any discussion of the scheme in the days immediately preceding a presidential campaign is certain to be complicated further by considerations of political expediency, arising out of the question as to who is going to deliver the women's vote, and where. The act became a law five years ago. Millions of dollars of federal and state moneys have been spent to enable its supporters to establish its merits. Who will say that the evidence submitted indicates that they have done so? Their present plea for the continuance of the scheme for only two years may well be construed as an admission that they have found nothing in the evidence that would justify them in asking for enactment of the procedure on a more lasting basis. The Sheppard-Towner Act has been condemned unreservedly by the House of Delegates of the American Medical Association. The pending bills to continue the act in effect are clearly within the ban of such condemnation. Now is the time to protest against their enactment. The Committee on Interstate and Foreign Commerce, House of Representatives, to which the House bill has been referred, at the present writing has not made its report. Even after it does so, the bill must be acted on by the House. The Senate bill is still to be acted on by the Senate Committee on Education and Labor, and by the Senate. If the Senate and the House agree on a measure, it will still have to be approved by the President. State associations and county societies, and the physicians of the country generally, should immediately telegraph or write to the President and to their Senators and Representatives protesting against the enactment of these bills.—*Jour. A. M. A.*, Feb. 6. 1926."

[1]. S. 2696, A Bill to Extend the Provisions of Section 2 of the Act Entitled "An Act for the Promotion of the Welfare and Hygiene of Maternity and Infancy, and for Other Purposes." H. R. 7555, A Bill to Authorize for the Fiscal Years Ending June 30, 1928, and June 30, 1929, Appropriations for Carrying Out the Provisions of the Act Entitled "An Act for the Promotion of the Welfare and Hygiene of Maternity and Infancy, and for Other Purposes," approved Nov. 23, 1921.

———o———

ALTRUISTIC SERVICE

Over ten per cent of the physicians of New York State, outside of New York City, are health officers, and over seventy-five per cent of the health officers are active members of the Medical Society of the State of New York. It is therefore of direct interest to a large group of physicians to consider what Dr. Matthias Nicoll, Jr., State Commissioner of Health, said about the rewards of health officer service in an address before the last meeting of the American Medical Association which was reported in the *A. M. A. Journal*, November 14, 1925, under the title, "Some Problems in Public Health Administration." Dr. Nicoll said:

"Official health work, fully entered in, by no means enhances the prospects of success in medical practice, but, as shown by experience, actually decreases it. In this respect, the health officer's position is quite unlike that of other administrative officials, whose

tenure of office usually entails little or no sacrifice of business or profession. Indeed, many of them derive much benefit from the reputation and association afforded by public service."

Any one who attends the annual conference of health officers of New York State will be impressed with the high medical standards and public spirit of the five hundred health officers in attendance—nearly as many as the number of doctors attending the meeting of the State Medical Society. All these health officers know the truth of what Commissioner Nicoll says about the rewards of health officer work.

Why should any group of physicians practice public health at a personal sacrifice?

What is wrong with a governmental system that penalizes a doctor for performing a necessary public service?

In order to discuss the answers to the two questions intelligently, one must understand the organization of a local health department and the statutory duties of a health officer.

The Public Health Law, Section 21, says that "the local board of health shall direct its health officer in the performance of his duties," and "the health officer shall be the chief executive officer of the board."

The law divides a health officer's duties into two classes: 1, those relating to communicable diseases or the control of all persons and things infected with or exposed to such disease; and, 2, those relating to environmental conditions, such as sewage, water supplies, and the great number and variety of annoying conditions called nuisances.

The Public Health Law, Section 25, places the control of communicable disease matters jointly with the board of health and the health officer; while Section 26 places the control of environmental conditions with the board of health only.

It will thus be seen that the law makes the board of health the supreme power in health matters. A health officer gets into trouble when he attempts to perform the duties that belong to a board of health.

A health officer has two classes of duties to perform as the executive officer of a board of health: 1, scientific, and, 2, police.

The health officer is the advisor of the board in all matters medical and sanitary. He investigates conditions, makes diagnoses, and gives professional advice to the delinquent parties and to the board of health.

If the delinquents fail to act upon the advice of the health officer, then police power may need to be used to compel obedience to the advice.

It is not the duty of a health officer to use police power. That duty belongs to a board of health, and through it to the department of police or of law. Most troubles and annoyances and ill-feelings encountered by a health officer arise from his attempts to perform police duty—a duty which does not belong to him. While politicians are prone to interfere in police duties of a health officer, they hesitate to go contrary to his professional advice. A wise health officer will stick to his professional duties and let the board of health attend to the police duties.

The two questions asked at the beginning of this article may now be answered intelligently. Health officers should not practice public health at a personal sacrifice; and they need not do so if they confine themselves to medical activities and leave police duties to boards of health.—*New York State Journal of Medicine.*

NOTE:—If we are ever to have an efficient public health service which will serve all the people of our state, the members of the West Virginia State Medical Association must get behind the state health council in its efforts to establish public health units in the several counties of the state.

REPORTS FROM COMPONENT SOCIETIES

Kanawha County

At the meeting of the Kanawha Medical Society, held January 19, we were addressed as follows:

Vertigo—Dr. M. F. McCarthy, Cincinnati.

Diagnostic and Prognostic Significance of Precordial Pain—Dr. Wm. L. Shannon, Cincinnati.

During the business session three new members were voted on and elected to this society as follows:

Dr. Clara Schunk, city.

Dr. Hugh Robins, city.

Dr. Thurman Gillespy, city.

Action was taken on a letter received recently in regard to sending copies of Hygeia to members of legislature from this section. The society voted to do this.

Dr. J. W. Moore, former councillor, was present at this meeting and received a warm welcome. He has been a medical missionary in China for three years.

The society held its regular meeting for February 2 at the Assembly Room of the Kanawha Hotel.

The scientific program of the evening was a symposium on Empyema presented by Dr. Douglas Roller, Dr. A. A. Shawkey and Dr. John Cannady of Charleston.

There was no business transacted.

At the regular meeting February 16, Dr. Henson of Charleston showed a case of Congenital Anterior Dislocation of the Knee in a colored infant as one of a series he is treating.

Dr. Wm. R. Goff of Parkersburg addressed the meeting on the general subject of Goitre and gave a very excellent presentation.

The business of the evening consisted of a favorable vote on Dr. R. J. Brown of St. Albans as a new member, and the name of Dr. Glass of Charleston was brought up for consideration as applicant for membership.

In response to a letter from Dr. Hardy, Director of Food and Sanitation of the city, it was decided to invite him to appear before society and explain the need of a Medical Milk Commission.

T. M. BARBER, *Secretary.*

———o———

Barbour-Randolph-Tucker

The Barber-Randolph-Tucker Medical Society met in the Y. M. C. A. building at Elkins, February 15th, 8 p. m., the following being present: Drs. Groomes, Updike, Moore, Perry, Owens, B. I. Golden, A. S. Bosworth, Gray, Guy Michael, Fredlock and Irons. Visitors, Dr. John Thames, Kingwood, health officer for Preston county, and Dr. Parmesano, D. D. S. Dr. Groomes, the president, presided.

Minutes of previous meeting were read and approved. Dr. Groomes appointed Drs. Hamilton, Owens and Miller as members of the central program committee.

Several communications were read for the information of the society, only two of which required action, viz: one from Secretary Neale, relative to securing ordinances in corporated towns and cities, to protect the careless distribution of patent or proprietary medicines, by dropping at homes, where children are liable to get and eat them, with danger, etc. The recommendation was approved and Drs. Perry, Golden and Groomes were appointed a committee to seek councilmanic action in Elkins and to take the matter up with other incorporated towns within our society.

Also a letter asking that Hygeia be supplied to the members of our legislature and state senate within our territory by our society that they might be informed as to proper and needed health legislation.

The secretary was authorized to supply Hygeia for the four members of the legislature and three members of the state senate as soon as it is known who are to be our representatives. (Said health journal to be secured at the reduced club rate.)

The appeal of Dr. Ray for aid in supplying papers and news items for *The Journal* was read.

Dr. Thames was asked to address the society and he responded most entertainingly, devoting his talk principally to health matters, especially as to the need of preventive measures, and saving lives, preventing suffering and educating the people. Dr. Thames is a live wire, and enthusiastic in his work. He has the tact to inspire others and is doing a great work in Preston county. He especially asked that the society cooperate with all the health agencies and particularly with members of the Woman's Health Club of Elkins, who are seeking a full time health unit for Randolph county.

Dr. Groomes extended the thanks of the society to Dr. Thames for his talk.

Dr. E. H. Updike read an interesting paper on "Country Obstetrics", in which he gave in detail his method and success, in thirteen years country practice.

Dr. Thames discussed the paper, emphasizing the importance of the patient expecting labor to be under the care of the physician before confinement, stating that frequently the physician was not consulted or called till labor had begun, or some unqualified midwife has taken charge and met with some abnormal condition or difficulty and then the physician's aid was sought when the condition may be difficult if not hopeless, for either the mother or child or for both. The physician should be engaged and consulted monthly.

The society on motion endorsed the full time health nurse, under health agency, for Randolph county and pledged cooperation and assistance to the Woman's Health Club.

The secretary was directed to write Dr. Bloss and Mr. Neale and invite them to attend the April meeting, day to suit them, 10th to 20th, at Philippi.

The society decided, unanimously, to reinstate former members, who were dropped from roll, for non-payment of dues on application and payment of dues for this year.

Adjourned to meet in Barbour county in April.

NEWS NOTES

Dr. W. W. Golden is spending a good part of the winter in Baltimore with his wife and daughter Helen. His son, Dr. B. I. Golden, has charge of the Davis Memorial Hospital in his absence.

Dr. A. P. Butt sailed from New York on February 13th for London, Paris and Budapest, sight-seeing, and post-graduate work in view. In his absence, Dr. C. A. Groomes has charge of the City Hospital in Elkins, and Dr. G. N. Cromwell has charge of the Allegheny Heights Hospital at Davis.

Dr. E. F. Moore, formerly an assistant in the hospital at Davis, has been in California for some time. He is expected back at Davis sometime this spring or summer.

Dr. E. M. Hamilton of Belington, while on his way to a hospital at Elkins, a short time ago, with his sister-in-law, Mrs. Tibbetts, had the misfortune to strike two children, boy aged 9, and girl aged 4, with his auto, at Harding. The girl only lived a few minutes; the boy was taken to hospital at Elkins but succumbed in a few hours. A coroner's inquest was held and the doctor was exonerated from any blame. Dr. Hamilton has the sympathy of all, as it was quite a shock to him and all have great sympathy for parents and friends of the children. It is hoped that the frequent auto accidents, especially with children, may cause parents to see to it that children do not play on the public highway.

So far as we know, Barbour-Randolph-Tucker Medical Society has the oldest living member in the West Virginia State Medical Association. Dr. John N. Bosworth of Philippi is now in his ninetieth year. He is quite active for his age.

J. C. IRONS, *Secretary.*

———o———

Marshall County

We learn with regret that Dr. J. Albert Striebich of Moundsville, our efficient president, has appendicitis and is intending to undergo an operation for same February 22 or 23 of this month. Dr. Striebich told your correspondent in strict confidence that he had a number of X-rays made of his appendix which showed the organ to be about the size of the great toe. We feel sure if it had been larger the good doctor would have so informed us.

We record with pleasure a great improvement in the condition of Sherwood Wilson,

son of Dr. and Mrs. O. P. Wilson. At the time of our last communication Sherwood was seriously ill from hemorrhages from the thigh following an operation for suppurative periostitis. However, a low ligation of the femoral artery with a number of blood transfusions saved his life.

Dr. J. W. Rickey of Moundsville is improving after an illness of two months. Dr. Rickey is the dean of the Marshall County Medical Association. He will be 84 years young sometime in the coming April. Two years ago the medical men of Marshall county tendered a banquet to the "boy" and made him a present of a cane with the following inscribed on a gold band around the cane: "Dr. J. W. Rickey, Dean of the Marshall County Medical Association." When Dr. Rickey was called upon for a speech he told us that the cane would be used only for Sunday or formal affairs; never throughout the week or on any ordinary occasion. Here is wishing the doctor many, many more birthdays.

In our last communication when speaking of the educational attainment of doctors' families we overlooked Alma Bonar, eldest daughter of Dr. and Mrs. W. P. Bonar of Moundsville. Now this was entirely inexcusable for Alma is a real student. She is one of the two girls of Moundsville to have ever received the golden eaglet conferred for merit work of the Girl Scouts. She is not only an honor student at the university, but takes a lot of extra responsibility of sororities and Girl Scout work.

The writer wishes to go on record as one of those who are greatly pleased with *The State Medical Journal* in its new form. It could not be improved upon unless it would be in the personals. That however, is up to members throughout the state.

—C. G. M.

Ohio County

At the regular meeting of the Ohio County Medical Society, January 15, Dr. J. P. Griffith of Pittsburgh, Pa., read a paper on the subject of, "The Problems of Ulcer of the Stomach and Duodenum". The lecturer reviewed the usual perplexities of this region without any especial new line of thought.

At a meeting of the Society, January 22, Dr. J. D. Heard, also of Pittsburgh read a paper on the subject of, "Prevention and Relief of Heart Disease." Dr. Heard is an old favorite here. His manner is charming and delightful. Those who may have read a review of his former lecture will recall his great hobby is the "alternate beat" obtained largely by the use of readings of the blood pressure. It is to be distinguished, of course, from an irregular heart. His prognosis for such a condition is not over three years to live at most. He does not believe that the "ear, nose and throat" men can always so readily tell about septic tonsils, although he gives them abundance of credit for their part in the investigations of focal areas. Time was when this reporter recalls that a discussion of "Heart Disease" meant arguments over size, regularity, murmurs, which valves were involved, position of apex beat and the like. All this is now obsolete. "Focal areas" occupy the throne. We wonder sometimes if there is not too much "focal area" in medicine at present. We hope we won't have to take a lot of it back. The doctor is lucky he doesn't have to wear medals for all the important "Heart Societies" he belongs to or he would look like General Foch.

Dr. Stuart McGuire of Richmond, Va., addressed a very large and very much interested audience, February 5, 1926 on the subject of, "Medical and Surgical Treatment of Exophthalmic oGiter." It must be a source of great satisfaction for a man to so highly gratify and please audiences as Dr. McGuire does invariably. Medical men are rather difficult to wholly satisfy en masse. The doctor did it here and in a very finished manner.

The following are officers of the Ohio County Medical Society: John E. Marchner, president; Charles Clovis, vice-president; A. L. Jones, treasurer; John Thoner, secretary.

NOTES

—Dr. Gustavius Selbach, graduate of the universities of Kiel and Bohn, and recommended by Dr. Bloodgood as a highly-trained

man, soon will round out his first year at North Wheeling Hospital. Like some strangers who come to the Ohio Valley, Dr. Selbach suffered an attack of typhoid shortly after his arrival (we have filtered, pure water now) and was a very sick man. Then, after convalescence, it was found necessary to have his teeth extracted. His health now is much improved.

—Dr. Coffield of Proctor, W. Va., graduate at Cincinnati, has been added to the interne staff at North Wheeling Hospital.

—Sister Bernadette, pharmacist at North Wheeling, has gone to the Parkersburg hospital of the Sisters of St. Joseph.

—Dr. A. J. Campbell, one of the oldest practitioners of the state, has recovered from a severe attack of bronchitis.

—Dr. Howard Phillips was operated on for appendicitis recently at the Ohio Valley General Hospital. He was stricken suddenly. He is our sole clarifier of perplexities in dermatology and we presume a few errors were committed by us during his illness. Upon recovery, Dr. Phillips received an appointment on the staff of North Wheeling Hospital. He already was a member of the Ohio Valley's staff.

—Dr. Frank Carroll has been appointed oral surgeon on the North Wheeling staff.

—Dr. R. J. Snider, Mrs. Snider and their two-months' old daughter were victims of a serious traffic accident recently. A taxicab struck the doctor's car, the baby was thrown through a side window to the street car tracks and a car was approaching. However, the motorman succeeded in stopping the car before running down the child. Mrs. Snider suffered contusions and lacerations while Dr. Snider's face was bruised severely. The baby suffered a fracture of the femur. It certainly looked as if the family not only had one guardian angel but three or four, considering the possibilities.

—Dr. Robert Armbrecht, after serving his interneship at Rochester, N. Y., has joined his father Dr. E. L. Armbrecht, in a new and enlarged suite of offices.

Dr. Edward Phillips was seriously ill with a phlegmon of the throat. The usual wild rumors about his condition got into circulation only to be set at rest with a notice on the operation schedule: "Prostatectomy, E. M. Phillips." As Dr. Phillips is one of the most prominent men in his profession in Wheeling the news of his recovery was welcome tidings.

HARRY M. HALL.

Marion County

The regular monthly meeting of the Marion County Medical Society was held in the Fairmont Y. M. C. A. at 7:15 p. m. February 23.

The following were present: C. O. Henry, W. F. Boyers, L. D. Howard, G. V. Morgan, J. M. Trach, G. H. Traugh, C. L. Parks, H. S. Keister, J. B. Clinton, H. R. Johnson, C. L. Holland, L. N. Yost, A. L. Peters, P. F. Prioleau, K. Y. Swisher, L. C. Davis and also Dr. Genevieve South of Fairmont and the speaker of the evening, Dr. Howard J. Phillips of Wheeling.

Dr. E. P. Smith was selected by the Society to read a paper on April first at the first tri-county meeting of 1926, which meeting will be held in Clarksburg.

Dr. Phillips delivered an address entitled, "The X-ray Therapy of Skin Diseases." Dr. Phillips is no stranger to our society. This is his second appearance within three years, and since his explanations are so good, he will likely be requested to return many times. Dr. Phillips stated that X-ray therapy of skin diseases was now standardized to dosage so that dermatologists could treat cases referred to them, in a uniform manner.

He explained what is meant by the term "skin unit" so that everyone could understand it. He then told us that the X-ray should be used only by competent men because, if improperly used, horrible burns would result.

Following this slides of many skin diseaes before and after treatment with X-ray were shown. His lecture was very understandable, was not too technical and was of great interest to all, especially to the general practitioner. G. H. TRAUGH, *Secretary.*

NEWS FROM HOSPITALS OF STATE

Dr. R. A. Tomassene presented the following interesting article at a recent staff meeting of the Ohio Valley General Hospital in Wheeling:

"There has always been the constant danger in the development of Otolaryngology and Ophthalmology of ignoring the study of systemic disease. It must not be forgotten that local pathology of the head and neck depends upon a systemic condition.

"The trouble with most specialists is that we are too much localists. There is always that tendency to concentrate our minds upon trifling manifestations of our own little sphere of practice, accentuating the importance of this or that pathologic condition, with no reference to the influence of remote conditions in the general system. The close interrelationship of Ophtalmology and disorders of the nervous system, of Tuberculosis and tonsillar ring infection, of rheumatism and tonsillar infection, of psychoneuroses and focal infection call for renewed interest in general medical diagnosis.

"From the standpoint of the eye diabetes and nephritis are outstanding pictures, and ocular findings must be considered in evaluating the importance of insulin on the one hand, and elimination on the other. When we come to nose and throat, we have often regarded the local condition as a symptom rather than a disease in itself, hence we know that it is useless to try to clear up a case of chronic laryngitis when an accompanying gastric catarrh is the etiologic factor. The frequent and sometimes persistent coughing of T. B. cannot but prove effective in producing congestion in the throat, and chronic laryngitis and pharyngitis are not only set up, but are incurable while the cough lasts. We have been called a nation of hawkers and spitters by Europeans, and the indictment holds good since the large majority of Americans suffer more or less with nasal and post nasal catarrh. Just what causes this condition has been the subject of much controversy and discussion, but climatic and industrial conditions do not explain it, since our climate is so varied that almost any kind of climate of civilized man can be found in this country yet the malady is universal.

MALPRACTICE CASE

"In going over the literature on this subject it might of interest to read Shurley's (Detroit) report of death of a case admitted for tonsillectomy.—

"In August, 1922, Mrs. E. B., widow, in company with her woman friend, who claimed to be a practical nurse, consulted him with reference to performing a tonsillectomy upon her son and removing his adenoids. The son did not accompany her. He was, physically, a fine appearing young fellow, nineteeen years old, six feet tall and weighed 175 pounds. According to her statement, he had been attending a military institute in Ohio, had been suffering from tonsilitis and had been advised by the resident physician of the institute to have his adenoids and tonsils removed. An appointment was made for him the following morning, and he appeared with the nurse at the appointed hour and was examined. In accordance with their general routine, where not otherwise arranged for, preparations had been made for a general anesthetic.

"He was preceded upon the operating table by a woman patient from Morenci, Michigan, to whom a half of one per cent solution of procain was administered and who, as she was leaving the operating room, said in the presence and hearing of the young man (who was outside the operating room awaiting his turn) that she was feeling fine and that her operation had been a splendid success.

"He entered the operating room in the surgeon's absence, his anesthetist and surgical nurse being the only person present at the time. He inquired what anesthetic the preceding patient had had, and was informed that it was a local anesthetic; whereupon he asked why he couldn't have the same thing and was told that he could. He then expressed his desire to have the same anesthetic administered to him that the preceding patient had received .

"In accordance with this request, the anesthetist, who was a graduate surgeon, pro-

ceeded to administer the same solution of procain and had injected two drams into the posterior pillar when the patient suddenly collapsed and, after about an hour spent in unavailing efforts to revive him, died.

"The mother was sent for, and, of course, asked how the death had occurred. Relying upon the information received from the anesthetist and surgical nurse, Shurley informed her that while procain was being administered as the anesthetic her son had collapsed and died.

"Some time thereafter he was sued for malpractice by the mother, as the boy's administratix, she claiming $50,000 in the name of his estate.

"She had employed a firm of skillful lawyers, who, he was informed by his counsel, departed from the usual practice of attorneys in malpractice cases and, instead of suing, as the lawyers term it, "in tort," or, in common language, for the negligence, or malpractice of the physician, claimed that she had told him of having been warned by her family physician (conveniently dead) never, under any circumstances, to permit cocain to be administered to him. She claimed that he had agreed not to administer cocain or any other of its derivatives; that he administered cocain, or one of its derivatives, and that he had told her that he forgot to tell the anesthetist to administer a general anesthetic, and not cocain or other local anesthetic, and that the cocain had caused his death; and, instead of claiming, as is usual, damages for the negligence, she claimed damages for this claimed breach of contract.

"His counsel informed him that this was a very cunning device, inasmuch as it might cut off his right to demand that she prove the malpractice by the testimony of surgeons as is the rule of law in ordinary malpractice cases, and that it would leave the case to be presented to the jury, on this phase of the case, merely upon the testimony of lay witnesses, whom the jury might believe as against his uncorroborated denial of the fact that any such agreement had been made by him.

"Counsel said, however, that this would still leave the case in such condition that plaintiff must produce such medical testimony to the effect that the death did really result from the administration of cocain, and which would warrant the jury in finding this to have been the fact, and that if she did not present such testimony, he would still have the right to demand that the judge direct a verdict in his favor because of failure to prove the contention.

"It will be quite apparant to you, he said, that, as it was claimed by his lawyers, plaintiff's claim was founded upon the similarity of the two words 'procain' and 'Cocain'. He did, in fact, tell her that 'procain' had been administered; but not being familiar with the name of the drug, she probably understood him to say 'cocain', and she must have stated this to her lawyers.

"There was no medical testimony produced by plaintiff tending to prove that the boy's death was, in fact, caused by the administration of cocain, and none that cocain was, in fact, administered, but the able judge who presided at the trial held that sufficient testimony had been developed by her own and her companion's testimony, to warrant submitting the case to the jury.

"The trial occupied a week, and the jury promptly returned a unanimous verdict in his favor.

"One very interesting point of law was developed when the trial judge held that the boy, although still a minor and under his mother's guardianship, had arrived at such a stage of mental development as to give him the right to choose what anesthetic should be administered to him, and the case was submitted to the jury upon that basis.

"Under all circumstances, it was very clear that this was a case of thymic death, and his associates, Dr. Gaines, and Drs. J. B. Kennedy and Frank T. F. Stephenson, as well as he, testified to that effect in response to hypothetic questions covering the proven facts of the case. No postmortem was held. The coroner gave the cause of death as paralysis of the phrenic nerve. No one knows the real cause of death, however, which is greatly to his advantage legally.

"Aside from the medical and surgical facts involved here, his counsel have made these suggestions as to the legal aspects of the case:

"1. In all your cases be very careful that, at least one physician besides yourself is present at the interview where arrangements for an operation are made.

"2. Wherever possible, have the details in writing. This can be done in the manner of taking history, jotting down the points in the presence of the person or persons with whom the arrangements are made, and finishing the memorandum with a full statement of the details of the anesthetic, operation, perhaps the price, or confirming the arrangement by letter in some other way."

The Wheeling Hospital staff for 1926 includes: John Gilmore, re-elected, president; M. B. Kelly, vice-president; T. M. Klug, secretary. The program committee is M. Gaydosh, R. G. Snyder, H. T. Phillips and J. G. Thoner.

At the meeting Wednesday, February 10, an interesting paper was read by Dr. John Gilmore, on, "Lower Lobe Tuberculosis."

The Ohio Valley General Hospital staff for 1926 includes: H. M. Hall, president; George Viewig, vice-president; J. W. Gilmore, secretary. Advisory committee, Robert Reed, M. B. Williams, W. S. Fulton and Turner Morris. Interne committee, E. L. Armbrecht, chairman, with the following members: A. K. Hoge, Will Cracraft, J. R. Caldwell and Earl Glass. Program committee, A. L. Jones, Charles Keesor and Howard Phillips.

Dr. Aikman on Tuesday, February 9th, gave a well prepared paper on "Toxic Goiter". It was discussed by Dr. D. A. MacGregor particularly and by the thirty members present. What made this a good meeting was divergent opinion. Any speaker who can secure wide discussion even if it doesn't agree with his conclusions can consider himself having done his duty.

STATE AND GENERAL NEWS NOTES

TRI-STATE MEDICAL SOCIETY ORGANIZED

Dr. Thomas W. Moore was elected president, Dr. Oscar B. Biern, vice president, and Dr. F. O. Marple secretary-treasurer of the Tri-State Medical Association, organized in Huntington January 21, when more than 300 physicians and surgeons from West Virginia, Ohio and Kentucky convened in the Hotel Prichard. The officers are Huntington men.

The board of directors included the above officers and Dr. Gilbert Nicklethwaite, of Portsmouth, O., and Dr. A. H. Winans, of Ashland, Ky.

The presidents of the associations of the three states are exofficio members of the advisory council.

Dr. James R. Bloss, of Huntington, is president of the West Virginia Medical Association; Dr. Rice Cowan is president of the Kentucky body and Dr. C. D. Selby president for Ohio.

Election of officers closed the day's meeting, which began at 2 o'clock and was largely devoted to the reading and discussion of scientific papers by specialists of national renown.

Three hundred and thirty-five covers were laid for the banquet in the Italian room of the hotel.

A gesture of deference to the out-of-town delegates was made by Dr. L. T. Vinson in recommending a division of officers wherein Ohio and Kentucky cities would be represented but after talks supporting the recommendations for officers as elected were made by Dr. Nicklethwaite, Dr. Holzer, of Gallipolis, and Dr. Winans, the delegates voted unanimously in favor of the officers as named. The out-of-town delegates referred to Huntington as the logical place for the meeting, and to the Huntington officers in recognition of their work in sponsoring the convention.

Particular praise of the work of Dr. Biern and Dr. Marple was voiced by the association, Dr. Holzer's suggestion for a vote of thanks meeting with marked approval.

"This first convention has been arranged and brought to a highly successful conclusion by Dr. Biern and Dr. Marple, and I believe

it fitting that they should be asked to continue their executive efforts," Dr. Holzer said.

Before the election vote Dr. Biern asked permission to withdraw his name, saying that he could best serve the association from the ranks, but no reconsideration of the slate was allowed.

As explained from the rostrum at the opening session, the order of papers read was not reflective of their merit. The scientific program, delegates said, was the most conclusively authoritative ever to be heard in Huntington. Men of high professional standing accepted the invitation of the local committee on arrangements to lecture, and were warmly welcomed, with visiting delegates, by Dr. Will E. Neal, mayor, and Dr. James R. Bloss.

Responses were made by Dr. Selby, president of the Ohio association, and by Dr. Irvin Abell, of Louisville, who represented Dr. Rice Cowan, president of the Kentucky association.

Discussion of interest followed the reading of each paper, the first of them being from Dr. Paul H. Ringer, of Asheville, N. C., on "Fallacies in the Diagnosis of Pulmonary Tuberculosis." Dr. Ringer cited the pitfall of diagnosing other diseases as tuberculosis, and the equally dangerous error of failing to diagnose tuberculosis correctly, due to confusion of symptoms. Clinical methods, laboratory aids, with especial reference to X-ray work, were discussed at length.

"Diabetes" was the subject of the paper from Dr. Frederick M. Allen, of Morristown, N. J., one of the three recognized authorities on this manifestation.

Dr. Clifford H. Grulee, of Chicago, lectured on "The Differential Diagnosis of Abdominal Pain in Children."

"The Differential Diagnosis of Syphilis and Focal Infection from Their Eye and Ear Manifestations" was the subject of the address from Dr. George W. Mackenzie, of Philadelphia, specialist and former faculty member of the University of Pennsylvania.

Dr. Abell, of Louisville, lectured on "Acute Pancreatitis" with illustrations from slides, closing the scientific program.—*Huntington Herald-Dispatch.*

59th ANNUAL PROGRAM IS BEING ARRANGED

The following are the minutes of the scientific committee meeting held in Charleston January 17, in the executive secretary's office:

Those present:

James R. Bloss, president, W. Va. S. M. A.

G. H. Barksdale, chairman, committee.

O. D. Barker, Parkersburg, member.

D. A. MacGregor, Wheeling, scientific secretary.

E. Bennette Henson, Charleston, chairman, surgical section.

William R. Goff, Parkersburg, secretary, surgical section.

C. A. Ray, councillor, Sixth district.

Mr. Sterrett O. Neale, exofficio secretary.

Chairman Barksdale read that section of the constitution and by-laws relating to the duties of the committee and asked if any specific instructions had been given by the House of Delegates. There being none, the chairman then brought up the matter of correlation of all sections to the end that the program for the fifty-ninth annual session may be complete and minimize the possibility of any conflict.

Upon motion of Dr. Barker, the secretaries of both the Surgical and Ear, Eye, Nose and Throat sections were requested to make tentative reports to the scientific secretary, Dr. MacGregor, by March first, so that the work of the committee might be correlated.

Chairman Barksdale then brought up the matter of policy to be pursued in arranging the program with relation to foreign speakers. There was considerable discussion as to past precedent, and it was the committee's view that not more than one-third of the number of speakers be from outside of West Virginia.

The executive secretary then read Section 4, Chapter III of the State Association's By-Laws for information of the committee, the section setting forth:

"Non-members of this association, resident in West Virginia, shall have no voice at any time in the deliberations of this association and shall not be permitted to take any part whatsoever in the program or discussions."

President Bloss suggested that the committee get as many papers from component societies as possible.

Dr. MacGregor moved that when names of foreign speakers are suggested they shall be submitted to other members of the committee to decide whether the proposed speaker is acceptable.

Upon motion of Dr. Henson it was ordered that scientific sessions be conducted from 9 a. m. to 1 p. m. with afternoon hours to be filled by the scientific committee, so as not to conflict with the business sessions. He also moved that all papers be limited to 20 minutes, this time to include lantern slides, and all discussions to 5 minutes. This was adopted.

It was decided to make periodical examination of the apparently healthy an integral part of the program.

Upon motion of Dr. MacGregor the matter of obtaining adequate stenographic records of all scientific proceedings was left to the discretion of the executive secretary provided that the cost of same be approved by the president of the association.

The executive secretary was authorized to superintend the printing and distribution of the annual program. Also it was decided to ask all who are to have papers on the program to submit 100-word abstracts for publication in the program.

The remainder of the session was devoted to discussion of the several features of the program and of the specialists in the several branches of medicine and surgery who are to be invited to appear before the association, after which the committee adjourned to meet at the call of the chairman.

———o———

DONATES $10,000 A YEAR FOR PNEUMONIA STUDIES

New York University has received a donation of $10,000 a year from Lucius N. Littauer, glove manufacturer, for studies in the prevention of pneumonia. Mr. Littauer's wife died of pneumonia two years ago. The fund is to be under the control of Dr. William H. Park and is payable semi-annually in sums of $5,000 each.

REPORTS X-RAY BURN CURE

PARIS.—There will be no more deaths and amputations from X-ray cancer when a new discovery of Professor d'Arsonval is generally applied throughout the world, according to a paper he read to the French Academy of Sciences.

Dr. Debedat, Director of the Radiologic Service of the Saint Andre Hospital at Bordeaux, who himself is afflicted with X-ray burns that threatened the amputation of several fingers, applied d'Arsonval's discoveries to himself and is the author of the report the great professor read.

Debedat applied a high-frequency electric current, which determined the thermocoagulation of the blood, thoroughly "baking" the ulcerized epitheliums, and after several weeks' treatment he was completely cured.

The nature of the report was such that d'Arsonval categorically stated: "No one need die of X-ray cancer nor henceforth suffer amputation."

The discovery and application is considered one of the greatest forward steps in science for several years.—*New York Times.*

———o———

DIVERTICULITIS OF INTESTINE

Arthur H. Bogart (*Long Island Med. Jour.* July, 1925) stresses the following points in an article on this subject based upon his experience in eight cases: First. That diverticulitis, though rare, is, nevertheless, a definite pathological entity. Second. That acute diverticulitis is a surgical disease, and when diagnosed, requires prompt surgical treatment, except in certain cases indicated above. Third. That in any acute abdomen, its possibility should not be overlooked, particularly in males, where the lesion appears to be about, below and to the left of the umbilicus. Fourth. That a tumor in the left lower quandrant of the abdomen may be a carcinoma or a diverticulitis, or both, and that while it may be feasible to remove such a tumor, it is a major operation subject to the dangers of any resection in that locality, plus existing infection in the case of diverticulitis.

PUBLISHERS APPROVE EDUCATIONAL PROGRAM

Members of the West Virginia Newspaper Publishers Association, in annual session at Wheeling February 12, unanimously voted to support the State Medical Association in the campaign to educate the public as to the necessity of keeping well.

Discussion of policy as to the handling of "free publicity" by newspapers of the state, reverted entirely to a discussion of the medical association's health program. Secretary Neale was in attendance, explained in detail just what the medical association proposes, and asked for the whole-hearted cooperation of the publishers.

Following his paper, the discussion was opened by the Hon. H. C. Ogden, publisher of the *Wheeling News* and *Intelligencer*, and several other large papers of the state. Among other things, Mr. Ogden declared that members of the medical profession should not be criticised by publishers for not advertising; that the commercial element never should enter the life of the ethical practitioner of medicine.

He reiterated what Secretary Neale had stated to the effect that the medical profession has nothing to sell; that none of its discoveries ever have been copyrighted or trademarked; that the medical profession handles a preponderance of charity work about which the public never hears; and that the medical profession was founded upon an altruistic basis. For these reasons Mr. Ogden said the medical profession was entitled to a great deal of credit and that the newspapers should assist the medical profession wherever possible in establishing a more personal touch with the public.

Colonel J. Harvey Long, publisher of *The Huntington Advertiser;* W. L. Mengert, business of *The Huntington Herald-Dispatch;* J. W. Short, editor of the *State-Gazette*, Point Pleasant; J. M. Boyer, publisher of the *Morgantown Post;* and S. C. Shaw of the *Moundsville Echo*, all spoke in favor of the medical association's plan. W. Guy Tetrick, president of the publishers and manager of the *Clarksburg Exponent*, expressed himself forcibly in favor of the educational plan.

Upon motion of Mr. Ogden, seconded by Mr. Long, the publishers unanimously went on record as being sympathetic with the state medical association and with their aims and commended the medical association's educational endeavors to the publishers of West Virginia as being worth while and worthy of every consideration.

———o———

OFFICIAL CALL ISSUED FOR A. M. A. SESSIONS

The official call for the seventy-seventh annual session of the American Medical Association, to be held in Dallas, Texas, Monday, April 19, to Friday, April 23, has been issued.

The House of Delegates will convene April 19; the scientific assembly will open Tuesday, April 20, at 8:30 p. m. The various sections of the scientific assembly will meet April 21 at 2 p. m. and subsequently, according to their respective programs.

West Virginia is entitled to two delegates, President Bloss being a delegate this year with Dr. C. R. Ogden of Clarksburg, as his alternate; Dr. H. P. Linz, chairman of the council, is delegate for 1926-27 and Dr. Robert A. Ashworth of Moundsville, is his alternate.

The official call is signed by William D. Haggard, president; Frederick C. Warnshuis, speaker of the House of Delegates, and Dr. Olin West, secretary. A number of fellows and members of the A. M. A. in West Virginia are planning to attend.

———o———

AGED DOCTOR DIES

Dr. M. H. Waldron of Naugatuck, Mingo county, died January 2 of heart disease. He was 82 years old and licensed in 1885 under the waiver clause. Dr. Waldron attracted quite a bit of prominence in 1924 when he rode his horse to the rear of John W. Davis' special train, demanded that the former ambassador to the Court of St. James appear and shake his hand—and the ex-ambassador did. The ensuing conversation was so interesting that Dr. Waldron galloped several hundred yards alongside the moving train. He was widely known in his mountain region.

RARE DISEASE COSTS SEAMAN TWO TOES

Ainhum, one of the rarest diseases, necessitated, February 13, the amputation at the base of both small toes of John Davis, a seaman, who contracted the disease while on an exploration trip in the African jungles. Surgeons said that removal of the diseased tissue was the only cure known.

What causes the disease is not known. It usually first appears, surgeons at the hospital said, as a ring of fibrous tissue around the base of the little toe. As the ring continues to grow it cuts through the muscles, tendons, nerves, bone, and last of all the blood vessels, causing the toe to wither and drop off. It is said to be entirely painless.

Then it may appear at the base of other toes and repeat the process, or it may develop further back on the foot. There was one case of record, surgeons said, when the painless natural amputation took place sixty times until an entire leg was gone. Apparently it is not toxic and does not affect the system.

Although no germ or other organism causing the disease has been found, it is said to resemble a parasitic disease. It is rare everywhere, but more common in Southern Africa. Davis had lost most of both small toes when the Elder Dempster Steamship Line, in whose service he is employed, sent him to the hospital.—*New York Times.*

———o———

STATE NURSES' BOARD OF DIRECTORS MEETS

The outstanding feature of the session of the board of directors of the West Virginia Nurses' Association held in Parkersburg, February 13, was the employment of a graduate registered nurse as an educational director for a period of six months. Her duties have been outlined as follows:

1. The giving of information to high school students regarding the ideals and standards of the nursing profession and the opportunities in its various fields.

2. The giving of information to these students concerning the meaning of the words "accredited school" thus making possible the intelligent selection of a training school.

3. The securing of an adequate number of students for our training schools from the ranks of our high school students.

4. The education of the general public through opportunities to address the men's and women's clubs and the various committees throughout the state, thus securing intelligent moral and financial support in the solution of the problems met in our efforts to provide adequate nursing care for the sick.

5. The educating of the members of our hospital directory boards and community leaders concerning the ideals and standards of the nursing profession. We want to establish the fact that nurses' training schools are, primarily, educational institutions.

The board went on record condemning the practice of hospitals within the state, who are allowing nurses to do twenty hour duty, this twenty hour duty being contrary to the standards adopted by the State Association.

Eighteen new members were accepted by the board, this bringing the membership of the association close to 700.

DR. FITZPATRICK TELLS HOW TO POSTPONE YOUR FUNERAL

CHICAGO—People are dying because they don't know how to live, said Dr. Gilbert Fitzpatrick, a member of the executive committee of the Gorgas Memorial Institute, before the Ohio society of Chicago. "How to postpone your funeral," was his subject.

"The great bulk of human ills," he said, "are of our own making; they are mainly avoidable and greatly within our own control. People overeat, overwork, and overtax their bodies and mental energies. Along with these conditions goes insufficient sleep and exercise. I think the urban half of our population is getting along on too little sleep.

"Improvement lies along the path of education. We must teach the individual members of society how to live healthy so that the declining life cycle may be productive and happy and not looked upon with dismay or sorrow."

DIES STUDYING CHOLERA

PARIS.—Another distinguished physician has fallen a victim to his own work for the advancement of science. Letters from Pondichery, French possession in India, report that Dr. Ernest Desnos, member of the Academy of Medicine, died of cholera there November 28.

Dr. Desnos, in spite of his advanced age, went to India several months ago to make a special study of cholera.

Dr. E. Desnos was born in France, 1852. He was one of the leaders of Urology in Europe; author of an exceedingly valuable book on this subject, founder of the Association Francoise d'Urologie, in 1896; and of the Association Internationale d'Urologie in 1908; collaborator with Dr. Pousson in the publication of "Encyclopedie Francaise d'Urologie" one of the world's authorities on this subject.

He was a great traveller and big game sportsman; an inspiring teacher and universally loved by all with whom he came in contact throughout his long scientific career.

Since its foundation in 1908, he was the General Secretary of the International Association of Urology. W. S. M.

LOCATES IN UNION

UNION, W. Va.—Dr. J. R. Richardson, who arrived in Union December 28, has definitely decided to locate here.

Dr. Richardson is a native of Wytheville, Wythe county, Virginia. He received his A. B. degree in 1904 from William and Mary College, and in 1910 graduated in medicine from the University of Louisville. He has been in active practice for the past sixteen years, first at the City Hospital, Louisville, Ky., for one year, after which he practiced in West Virginia and Pennsylvania, coming to Union from the Bethlehem Hospital, Hazelwood, Pa., where his service was that of assistant surgeon. He has also taken special work in the study of internal medicine at the University of Pennsylvania. Dr. Richardson is married and as soon as he can find a house will move his wife and two children here.

DR. CARMEN SERIOUSLY ILL

Members of the medical profession in West Virginia will be sorry to learn of the serious illness of Dr. Bliss Carmen, chief of the Radiological Service of the Mayo Clinic, Rochester, Minn. He is not expected to recover. According to reports received from Rochester, Dr. Carmen was in ill-health for some time. Recently he had an X-Ray picture taken along with a number of others. Upon examination of the plates, he came to his own and asked whose it was. His assistants explained that it was his own. The plate showed a cancer in the abdomen. Dr. Carmen received the information without comment and went about his duties for the remainder of the day. He later was operated on, but the cancer had spread to such a wide field that nothing could be done.

2,986 INSANE IN HOSPITALS

At the end of 1925 there were 2,986 patients at the three state hospitals for insane, as compared with 2,463 for the end of the fiscal year of 1916, it is shown by the records of the board of control.

The Weston State Hospital had 1,380 patients at the year's end. There were 744 males and 646 females; 1,145 whites and 234 colored. During December 47 were admitted, 26 were paroled, four recovered and 11 died.

At the Spencer State Hospital there were 687 patients, 419 males and 268 females. During the month 13 were received, five died and one escaped.

At the Huntington State Hospital there were 919 patients, 436 males and 483 females. Twenty-three were received, 18 released as improved, 17 paroled and five died.

CHANGES OFFICES

Dr. A. P. Gibson, whose practice is limited to eye, ear, nose and throat, announces the removal of his offices to suite 309, third floor, Union Bank Building, Huntington, W. Va.

J. HOWARD ANDERSON ACCEPTS TRUSTEESHIP

Dr. J. Howard Anderson of Marytown, associate editor of *The Journal*, has accepted a place on the board of trustees of the proposed, new Kanawha University which is to be located in Charleston. Other members of the board, 24 in number, are men prominent in professional and business life in southern West Virginia.

Dr. Anderson, who is in New York taking a post-graduate course, wired his acceptance early in February. He has been active in the State Medical Association for many years, having served as secretary for five years and was president in 1921.

———o———

50-YEAR-OLD DAY BOOK

When the circuit clerk of Marion county started prowling through his vault shortly after the first of the year he made an interesting discovery. He found a day book that had been the property of the late Dr. Ansley Blair who had practiced in the Fairmont region 50 years ago.

Workmen also uncovered two pints of old Kentucky liquor and a box of "parlor" matches. There has been much speculation as to whether there was any connection between the three "finds."

———o———

MEDICAL STUDY TOUR

The Travel Study Club of American Physicians, founded at the London International Medical Congress of 1913, is announcing plans for its 1926 Study Tour. Sailing from New York on June 12th, the party will visit clinics and medical institutions in the medical centers of Oslo, (Christiania), Stockholm, Copenhagen, (optional to Berlin and Munich), Cologne, Heidelberg, Strasbourg, Berne, Zurich, Leysin, Geneva, Paris and London, returning on August 8. Physicians in good standing, to the limit of 50, are invited to participate in this tour, and the secretary, Dr. Richard Kovacs, 223 East 68th street, New York City, will supply any further information desired.

LOW COST GASOLINE

Members of the Kanawha Medical Society have been given the advantage of the "commercial rate" on gasoline, according to a letter received from the Midland Oil and Gas company, operating seven filling stations in Charleston. In other words, members of the society may purchase gasoline at 1 cent a gallon less than the quoted rate. It is understood that this company will extend this saving to all members of the state association visiting Charleston.

"Upon presentation of your membership certificate, the attendant (at the filling station) will extend with pleasure the reduced rate," says the letter. "Needless to say, this will mean quite a saving on your annual gasoline bill."

———o———

SMALL DAUGHTER DIES

Mary Catherine, 6, daughter of Dr. and Mrs. Fred Stansbury of Beckley, died January 9 at the home of her parents, following a month's illness. She was thought to have successfully defeated an attack of pneumonia but it so weakened her heart that a relapse occurred. Besides her parents, Mary Catherine is survived by a small brother. Dr. Stansbury has many friends among our members who will be grieved to learn of his loss.

———o———

GASTROENTEROPTOSIS AND ITS PROBLEMS

W. H. Axtell (*Am. Jour. of Surg.*, June, 1925) believes that the condition of gastroenteroptosis and the disorders produced thereby are not generally recognized or, if recognized, too little importance is attached to them. Failure is due to lack of detail work in the examinations. In case of surgery of the appendix, gallbladder and stomach relief is not obtained without a full knowledge of the significance of the conditions produced by ptosis. Aortitis or arteritis is a very common and even a dangerous complication of ptosis and the disorders produced thereby, and may or may not be leutic—generally not.

PROGRESS OF MEDICAL JOURNALS IS SHOWN

In 1913, at the suggestion of the editors of several state medical journals, the work of the cooperative advertising bureau was begun. The cost of operating medical periodicals was proving almost prohibitive in some states. Others, in order to avoid financial loss, were being forced to accept advertising from the makers of doubtful preparations. At that time, many of the state journals were poorly printed on poor paper. Some were small, some large. A collection of them displayed not even the two-by-two uniformity of the passengers in Noah's Ark. It seemed to these editors that a central advertising bureau, located at the headquarters of the American Medical Association, could obtain advertising business not for one but for many journals. In this way, soliciting expense would be spared to the journals and greater circulation obtained for the advertisers. Furthermore ,the close association of such a bureau with the Council on Pharmacy and Chemistry would result in printing only the advertising of manufacturers of ethical products, rather than that of any applicant who could pay for space. This year virtually marks the completion of the program set in operation in 1913. Thirty state journals are now members of the cooperative advertising bureau. Only one is not a member of it. These thirty journals are now appearing with a uniform six by nine inch type size of page. Many of them, with the current year, are adopting more attractive covers. All are being printed on good paper. One can turn the pages of almost all of them and never see an advertisement of which an ethical journal would be ashamed. They are solvent and unafraid. The efforts of the state societies, editors and managers since 1913 have had much to do with bringing about this better state of affairs. At the same time, a great deal of credit belongs to those who conceived the idea of the cooperative advertising bureau and to those who have directed its activities, whereby more and better business has been obtained at half the cost of the same volume of advertising if it were obtained through individual solicitors.—*Journal, A. M. A.*, Feb. 13, 1926.

———o———

SUPREME COURT RULES IN CHIROPRACTIC CASE

A decision by the supreme court of Illinois[1] relating to chiropractic has brought out a new answer to the claims of chiropractors and practitioners of similar methods. The defendants in the case argued that practice of chiropractic was "a useful and harmless calling which cannot be regulated by the state." This claim was declared to be so entirely without merit that any discussion of it was unnecessary. The decision went on to state, however, that "if a chiropractor can, by manipulation, move a dislocated vertebra so that the pressure on a nerve can be relieved and paralysis cured, he can by the same process dislocate a vertebra and cause a paralyzed condition. Any method of treating human ailments which, when practiced skillfully, can restore a diseased human body to health is capable of doing great harm when practiced without care or skill. A method of treating human ailments cannot be both useful and harmless. If it is sufficiently efficacious to be useful, it is at the same time capable of producing harmful results." The chiropractor, no less than the physician or any one else who is to treat the sick, needs to have a sufficient training in the fundamentals of medicine so that he will know at least when his manipulation may be harmful.—*Journal, A. M. A.*, February 13, 1926.

1. People v. Walder (Ill.) 148 N. E. R. 287 [J. A. M. A. 86:371 [Jan. 10] 1926).

SIX PHYSICIANS ARE SERVING IN CONGRESS

The Congress of the United States is made up of ninety-six Senators and 435 members of the House of Representatives. About two thirds of these congressmen are lawyers or have had legal training. The remainder are mostly business men, farmers and publishers, with a sprinkling of educators and engineers. Only six are physicians, five of whom are members of the House. There are three dentists, two of whom are in the House. In previous Congresses the number of physicians has been slightly greater, though the profession has never been well represented at the capitol. The only physician in the Senate is Royal S. Copeland, Democrat, New York, who was health commissioner of New York City. He has served as vice president of the American Public Health Association. The dentist in the Senate is Henrik Shipstead, Farmer-Labor, Minnesota. Two other Senators, Woodbridge N. Ferris, Democrat, Michigan, and George H. Moses, Republican, New Hampshire, studied medicine for brief periods. Three of the physicians in the House are Republicans and two are Democrats. Three were in active practice when elected, while one was engaged in farming; the other, who is also a lawyer, was specializing in legal medicine and the practice of law. Dr. E. M. Irwin, Republican, Belleville, Ill., graduated from Missouri Medical College of St. Louis and practiced from 1892 until elected to the sixty-ninth Congress. Dr. Ladislas Lazaro, Democrat, Washington, La., has been a member of the last seven Congresses. He was educated at Holy Cross College, New Orleans, and graduated in medicine in 1894, having been in active practice until 1913. Dr. John J. Kindred, Democrat, Astoria, N. Y., studied medicine at the University of Virginia and Hospital College of Medicine of Louisville, Ky., from which he took his M.D. degree in 1889. He is also a law graduate and has lectured on medical jurisprudence and is especially interested in mental disease. He served in the sixty-second Congress and from the sixty-seventh to date. Dr. William T. Fitzgerald, Republican, Greenville, O., graduated from Wooster University Medical School and practiced until elected to the sixty-ninth Congress. Dr. John W. Summers, Republican, Walla Walla, Wash., engaged in the practice of medicine for 25 years after graduating from the Kentucky School of Medicine and the Louisville Medical College. He has been in Congress since the sixty-seventh Congress. The two dentists in the House are Dr. Roy O. Woodruff, Republican, Bay City, Mich., and Dr. Frank Crowther, Republican, Schenectady, N. Y. Both have served in a number of Congresses. Although these physicians and dentists are the only representatives of their professions in Congress, the biographic sketches of some other members, as given in the Congressional Directory, reveal an interest in public health and medical matters. Thus, Mr. Robert G. Houston, a lawyer, Republican, Delaware, was a member of the first state anti-tuberculosis commission and is now vice chairman of the commission for the feeble-minded, while Representatives Louis A. Frothingham, Massachusetts, Ernest R. Ackerman, New Jersey, and John M. Morin, Pennsylvania, are trustees of various hospitals.—*Journal A. M. A.*, Feb. 13, 1926.

———o———

SPECIALISTS TO SPEAK

Preliminary arrangements for the international meeting of the National Tuberculosis Association indicate that several of the leading tuberculosis specialists from different European and other foreign countries will be in attendance. The meeting will be held in Washington, D. C., October 4 to 7, immediately following that of the International Union Against Tuberculosis, which meets in the same city, September 30 to October 2.

The West Virginia Medical Journal

Directed and Edited by the Committee on Publication

[The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible]

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS:

WALTER E. VEST, Huntington — HARRY M. HALL, Wheeling — J. HOWARD ANDERSON, Marytown — C. W. WADDELL, Fairmont

MR. S. O. NEALE, *Secretary-Business Manager*, Charleston

Entered as Second Class Matter, January 1, 1926, at the Postoffice at Charleston, West Virginia

Volume XXII APRIL : 1926 *Number 4*

DIAGNOSIS AND TREATMENT OF BRAIN TUMORS*

By WALTER E. DANDY, M. D.
Baltimore, Md.

ALL LESIONS become more frequent as acquaintance with them grows. If we hark back but a very few years, appendicitis was unknown, then very rare, and finally a very common ailment. The same story is true of any number of lesions. The great educator of true perspective is necropsy and operation. Brain tumors are passing through the rare stage because neither necropsy material nor operative inspections have checked mistaken diagnoses. But in a few clinics intensive studies have shown not only that brain tumors are among the most frequent tumors of the body, but during the first six decades, particularly from the second to the fifth decades, tumors are among the most common afflictions of the central nervous system.

The results of the long struggle in the solution of the problem of appendicitis should teach us much about the fundamental treatment of brain tumors, and prevent the repetition of many of the sad chapters in its story when told in later years. Two accomplishments have transformed a prohibitive mortality in the treatment of appendicitis into one which should be practically nil:—first and foremost, an early and accurate diagnosis and (2) an early and efficient operative procedure which eradicates the cause.

In the treatment of brain tumors, the same two factors are all-important, and in addition there is the third great factor—*localization* of the tumor. Although the diagnosis and

* Read before the fifty-eighth annual meeting of the West Virginia State Medical Association at Bluefield, June 11, 1925.

localization of appendicitis are nearly synonymous, the same is far from true in brain tumors. In fact, the localization of brain tumors has been the most difficult phase of this complex neurological problem.

It is doubtless known to you all that tumors as large as one's fist are still compatible with life and without giving the slightest evidence of their situation. For many years it has been possible to know that a patient was afflicted with a tumor, but we have not been able to tell where it was located. With such inadequate information, it is clear that operative results must be very poor. Without accurate information, I should venture the assertion that in the hands of the very best operators, less than one-third of all explorations for brain tumors would actually disclose the tumor at the first operation. In fact, so discouraging have been explorations for tumors of the brain, that, except when the location of the tumor seems clear, the palliative decompressive operation has become more or less routine. Obviously, such treatment is most unsatisfactory. There is only one way to cure a patient with a brain tumor, and that is by a complete extirpation of the growth by operation. Decompressions have been justifiable only because the location of the tumor has been unknown. When the tumor is localized, any treatment which delays exploration or is palliative, is no more justifiable than delay or palliation in appendicitis.

Although the rate of growth of brain tumors is variable, a fatal outcome is almost inevitable. But we have many warnings of this impending calamity. Tumors cause headache, destroy vision, produce paralyses, convulsions, speech, mental and other disturbances, and most of these changes are progressive. The great hope for patients afflicted with brain tumors, lies in the earliest possible diagnosis. To do this, it is incumbent upon us to suspect a tumor when any symptom or sign referrable to the central nervous system makes its appearance. Fortunately, it is now possible by the use of cerebral pneumography,—i. e., roentgenography of the brain after the injection of air into its ventricles or subarachnoid spaces—to diagnose and also to localize practically all brain tumors which cause pressure, and in the early stages of the tumor's growth. This being possible, the problem of handling brain tumors is greatly simplified.

The treatment of tumors is now reduced to a single simple formula: complete extirpation when the nature and location of the growth make this possible; and when impossible of removal, then and only then to produce the maximum decompression for palliation. Unfortunately, some brain tumors, by virtue of their infiltrating character, do not permit extirpation. In other instances, removal is precluded because of the invasion of the brain-stem, speech centers, or other vital parts of the brain. There are, however, many non-encapsulated growths in silent areas of the brain which, if detected early, can be completely removed. The so-called silent areas of the brain were formerly the greatest handicaps to cerebral surgery because they prevented diagnosis or localization of the growths owing to the absence of signs or symptoms. Formerly, it was necessary to perform palliative operations until the tumor grew beyond the confines of the silent brain and produced paralyses or other focal destructions of the contiguous brain with recognizable functions. Now these silent areas are the greatest assets for the success of brain surgery; for, the localization now being possible in another way, extirpation of the growth can be done with contiguous silent areas of the brain, when necessary, and still leave the patient without noticeable defects.

I have said that practically all brain tumors should now be localized and at once. Brain tumors give rise to two types of signs and symptoms: (1) localizing symptoms and (2) general pressure symptoms. If the former are present, the localization is automatically made. Their consideration need not detain us. But the overwhelming proportion of brain tumors give rise to so-called pressure symptoms, and it is to the consideration of this difficult problem of localization that I wish particularly to call your attention. As you know, the craniovertebral chamber is a closed and fixed space and its contents—blood, cerebrospinal fluid, and brain tissue—are almost totally incompressible. For this reason, a new growth is tolerated only by a

compromise with these intracranial contents and this compromise gives the warning signs: headache, nausea and vomiting, choked disc, etc.

Probably all brain tumors which produce intracranial pressure, produce (as an expression of this compromise) changes in the size, shape or position of the ventricles and subarachnoid spaces of the brain. If the fluid from these spaces is removed and air is substituted in its place, these changes in sizes, shape and position will be accurately registered in roentgenograms of the head. It is, therefore, clear that if these alterations are known, the location of the cause which produces them (the tumor) can be deduced. I will now show you a series of lantern slides which will explain the localizations of brain tumors from every part of the brain. In many instances of the localizations have been so precise as to permit transcortical incisions of great depth to find the tumor at operation, and often to successfully remove tumors which otherwise could never be found except at necropsy.

I should not wish to leave you with the impression that this is a simple and harmless procedure. Unfortunately, it is the reverse. It is both complicated and dangerous. The interpretation of the air shadows is difficult and is all-dependent on the intimate knowledge of intracranial anatomy and physiology. Its danger is shown by the fact that I have had three deaths in my first 100 injections. However, in over 400 since then, there have been none. This is owing to the fact that I have learned how to eliminate the dangers. Air is an irritant. When the ventricular channels are blocked, its absorption is prevented; a sero-sanguinous exudate results from its irritation; and this produces a marked accentuation of pressure symptoms. Many patients are so ill that this additional pressure could not be tolerated. To prevent this complication, the air should be removed as soon as possible after the skiagrams are completed. If the quantity of air injected is large (30 cc. or more) either the original ventricular fluid or saline solution may be replaced. In safe hands, the procedure is now without great danger. It seems inadvisable, at least at the present time, that a risk so great as the use of air requires, should be assumed except by a competent neurological surgeon.

Lantern slides were then shown as follows:

(1) *Tumors of the frontal lobe.* The localizations were made by dislocation of both lateral ventricles and the third ventricle away from the tumor (anteroposterior view). Often the homolateral ventricle, and at times the third ventricle, were obliterated. The third ventricle, when present, takes an oblique instead of a normally upright position (anteroposterior view); ventricular filling defects on the side of the tumor (lateral views).

(2) *Tumors of the temporal and parietal lobes.* Practically the same pictures as frontal lobe tumors, though with more pronounced filling defects. There may be elevation of the descending horn of the ventricle in temporal lobe tumors. Parietal tumors may dislocate the body of the ventricle downward, broaden its diameter and shorten its height, or narrow its diameter and increase its height, depending on the exact position of the tumor.

(3) *Tumors of the occipital lobe.* The lateral dislocation of the anterior horns of the ventricle (anteroposterior view, occiput down), is less than in frontal, temporal and parietal tumors, and may even be absent. Filling defects of ventricles and alterations in size, position and shape of the ventricles.

(4) *Ventricular tumors.* Filling defects in ventricles and evidences of hydrocephalus from closure of the ventricles. A small tumor in the body of the lateral ventricle showed a normal ventricle anterior to the tumor and hydrocephalus of the ventricle posterior to it. The sharp anterior and posterior margins of the tumor were shown by the abrupt lines of termination of the air shadow. A tumor of the third ventricle showed a bilaterally symmetrical hydrocephalus, but with no communication between the two lateral ventricles and with absence of the third ventricle.

(5) *Tumors producing symmetrical dilation of the lateral ventricles with intercommunication.* This line of tumors included (1) suprapituitary tumors growing upward and occluding the aqueduct of Sylvius, (2) pineal

tumors, (3) tumors contiguous to the pineal and third ventricle, (4) tumors in various parts of the posterior cranial fossa (cerebellum, cerebellopontine angle, brain-stem and fourth ventricle). All of these tumors block the iter or fourth ventricle. In one instance a shadow of a suprapituitary tumor was seen in the air background of the dilated ventricles; its presence could not be detected except in the presence of air. This has been an important finding in many other tumors situated elsewhere. In another case of suprapituitary tumor, the tumor had grown laterlawards and blocked one lateral ventricle and partially obliterated the third ventricle. A pineal tumor was shown causing dilation of the ventricles with partial obliteration of the third ventricle, and a large shadow of calcification in the air background.

An endothelioma arising from the leptomeninges near the pineal gland produced a great hyprocephalus of both lateral ventricles, partial obliteration of the third ventricle, and a great filling defect of the left lateral ventricle.

Various tumors of the posterior cranial fossa produce dilation of the third and both lateral ventricles. A case of cicatricial closure of the foramen of Magendie was shown (with dilated lateral and third and fourth ventricles). After a new foramen of Magendie had been constructed, the air could be seen in the cisterna magna and the cerebral sulci (indicating that the new foramen was patent several weeks after the operation). The patient has since remained well (now four years). Another case was shown in which a tremendously dilated cisterna interpeduncularis extended upward and produced a great filling defect in the left lateral ventricle. Both lateral ventricles were of enormous size owing to the obstruction in the cisterna.

DISCUSSION

DR. WALTER E. VEST, Huntington:

I do not know that it properly becomes an internist to discuss a paper on brain tumors, but I feel that Dr. Dandy's paper ought not to get by without a good many questions being asked, for most of us on the firing line do not know much about brain tumors, or, if we recognize them, it is so near the end of the game that it is not of much value to the patient.

The first question I want to ask is, what are the early symptoms that the general man should look out for to make him suspect a brain tumor? It is ordinarily reported, I believe, that the law of probabilities would indicate that most brain tumors are gliomata. If I am correct in my statement, from 25 to 50 per cent of brain tumors are of this type. I should like to ask Dr. Dandy if those statistics are correct, and what his clinic shows as to the average incidence of glioma. One question always put to us by the family when we suggest that the patient may have a brain tumor is, what are the chances of doing anything for this patient? If I understood Dr. Dandy, the probability of the cure of brain tumor varies inversely as the square of the time from the onset of symptoms to the diagnosis. The chances are very much increased in an early diagnosis, and in a late diagnosis are very much decreased. I believe Dr. Dandy said if the diagnosis was made early the mortality was approximately ten per cent, but he did not tell us how the mortality went up as a later diagnosis is made. I wish he would give us some idea of that, because that is one of the first things the patient's family mentions to you when you suggest that the patient may have brain tumor.

Another question I want to ask is about the permanence of end results; that is, the recurrence or mortality rate say three years after operation.

Dr. Dandy mentioned headache as a symptom of brain tumor. I should like to ask him if the headache of brain tumor is more intense in the morning than later in the day.

He also mentioned convulsions coming on after the twenty-fifth year as very likely due to brain tumor. I should like to ask him what other conditions after the twenty-fifth year, or in adult life, would cause convulsions, and if he considers that the menopause in women has anything to do with convulsions coming on at that time of life. This question I am asking because I have a patient now who has had convulsions ever since her menopause, for thirteen years now. The

convulsions are becoming not more frequent, but more severe. The patient has apparently no headaches. The only abnormality I can find is that she has these convulsions, and they are practically always nocturnal, usually coming on at about four or five o'clock in the morning.

DR. DANDY, closing the discussion:

The symptoms from which the general practitioner should suspect brain tumors are loss of vision, convulsions, staggering gait, deafness, loss of speech, disturbance of speech, loss of motor power, loss of sensory function, so-called illusional attacks, in which the patient has the sensation of smell and taste, and, of course, disturbances such as ataxia, nystagmus, and other things—in short, anything that refers to the brain to explain its symptoms.

There is no rule about the character of the headaches. Some have them in the morning; some have them at any time. There is one character of headache that I think very important; that is, straining at school or straining of any kind, from the increased congestion, causes headache. That is very important, and refers almost always to a brain tumor.

As to the percentage of tumors which are gliomata and endotheliomata, I am only guessing, but I think the percentage of probably removable, curable tumors, not recurrable tumors, is about 25 per cent. That includes dural endotheliomata, tumor derived from the meninges, tumors derived from the skull and which come into the brain, abscesses—in other words, lesions which produce intracranial pressure, and that is about 25 per cent. The percentage of gliomata which can be cured permanently I do not know, because it is only recently we have been extirpating them more or less radically. That they can be cured I have no doubt. We have many that have gone for three, four, or five years, which was about the beginning of our attack upon them. Of course, 60 per cent of all brain tumors are the non-operable tumors. We see many gliomata which we know we could have removed if we had gotten them a year or two years earlier. They now encroach upon the vital part of the brain. Just a few days ago I saw a man who for four years has been having convulsions and more or less headache. That tumor had been circumscribed in the frontal lobe until recently, when it had grown down into the motor area and then paralyzed one side. One can remove the frontal lobe without any loss of function.

The mortality of 10 per cent is the mortality from the removal of all tumors at all stages. For an early tumor I think the mortality is probably very much less, as the ten per cent includes patients who were unconscious at the time they came in. If you can localize the tumor carefully, even patients who are unconscious can be brought out of their coma and many of the tumors can be removed. Of course, the chances are tremendously reduced by that condition. The hopeless part of brain tumors is, of course, their character and the late stages. Early diagnosis will eliminate much of that, and I am sure in time the percentage of cures will be increased. There is no way by which we can tell beforehand whether the patient has a removable tumor or one that can not be removed. Only exposure will tell us that. The dural tumors, of course, do not recur.

As to the patient with convulsions, I should say I doubt whether there is a brain tumor. The further we go, the more I am convinced that in a short time we shall be able to explain all cases of epilepsy. There are a few now after twenty-five which I feel can be explained. Whether the convulsions have any relationship to the menopause, as in this case, I do not know. The common lesions which do cause epilepsy are tumors, vascular affections, etc. Some infections in the body will attack a vessel in the brain and produce epilepsy. It has been shown that if the brain is injured it may produce convulsions in that person. We all have a threshold at which convulsions will occur, and if that threshold is lowered convulsions will occur. Why the convulsions should come at night rather than during the day I do not know.

DR. C. R. OGDEN, Clarksburg:

Such papers as this of Dr. Dandy's are of tremendous value to an association of this

kind, notwithstanding that the general practitioner and others who attend this meeting may feel that such papers are beyond their ken. But they are not. I am confident that this paper of Dr. Dandy's will be the means of saving many lives in the next two years, because we shall go back and be on the lookout for these conditions, and, while we can not handle them ourselves, we can refer them to these masters. I know in the past we have heard such papers by the masters from the centers of population, and in a day or two, perhaps, pick up a case which should be referred to them. I wish to make a motion that this association extend to Dr. Dandy a vote of thanks for coming down here and giving us this very illuminating paper. Motion seconded and carried by a standing vote.

FAMILIAL DIABETES

By WM. W. STRANGE, M. D.
Huntington, W. Va.

THE LITERATURE of diabetes reveals numerous instances of the occurrences of this disease among several members of the same family and there are on record a good number of cases in which four or five brothers and sisters have had diabetes. Langaker [1] reported four children in a family of eight, all of whom died within four years. Later a fifth child died from diabetes. Joslin [2] tells of a family in which all twelve brothers and sisters, besides several other members of the family, were diabetic. Landis [3] reported a family of ten in which five brothers and sisters had diabetes. All of the brunettes in this family had diabetes; all the blonds escaped the disease. Pleasants [4] gave the history of a family that came under his observation in which two brothers and two sisters, besides two other relatives, had diabetes. He also gives the following references to the literature of familial diabetes: Isenflamm reported seven diabetic children in a family. Flint—two sisters and two brothers, father and paternal uncle. Senator—four children of a Polish Jew. Hertzka—three brothers and a sister. Naunyn—mother and four children. Bence Jones—three brothers and a sister. Mosher—father and mother, three daughters and a grandson. The oldest reference to familial diabetes that we have seen is that of Richard Morton quoted by Osler [5]. Morton, in his Phthisiologia 1689, records a family in which four children were affected.

Williams [6] in an analysis of one hundred histories of diabetic patients, found forty-eight cases that had twenty brothers and sisters with the disease. These forty-eight patients had eighty-five diabetic relatives, counting the collateral branches of the family. Since it is relatively infrequent that we find the majority of the members of one immediate family to be diabetic, it seems desirable to add to the reported cases the history of a family that recently came under observation.

Mildred H., white, female, age 16, height 5 feet 7 inches, weight 84 pounds, was first seen on June 26, 1925. Glycosuria had been discovered in November, 1923. She had been excreting sugar in large quantities though she had been taking insulin for the last year. The next morning the patient had developed signs of impending coma; the urine contained large quantities of sugar and acetone and the blood sugar determination (made by Dr. F. C. Hodges) showed 560 mgs. per 100 c.c. of blood. The patient recovered under intensive treatment with insulin and at the present time remains sugar free on a diet of about two thousand calories and twenty-five units of insulin a day. She has gained about twenty pounds and is able to attend school regularly.

The family history obtained at the time the patient was first seen revealed the following:

Ralph R., a brother, died in January, 1912, at the age of 6 years and ten months. He was known to have had diabetes for about a year. He died in coma.

Raymond H., a brother, age 22, was discovered to have diabetes when 17 years old. In April, 1921, Dr. Hodges found his blood sugar to be 150 mgs. He takes from 25 to 30 units of insulin a day but is careless about his diet and frequently shows glycosuria. He had never shown any evidence of acidosis.

No other cases of diabetes were known to be in the family at that time.

C. L. H., age 50, father of the four other diabetics, was found to have glycosuria in July, 1925. His blood sugar was 200 mgs. per 100 c.c.

Robert H., age 13, another brother of the first patient, was discovered to have a glycosuria in October, 1925. His fasting blood sugar was 131 mgs.

The two other sisters in this family—Marie H., age 25, and Catherine H., age 7—have shown no signs of diabetes. The mother is also in good health.

The paternal grandfather died in 1914 at the age of 74. His death was caused by trauma but for twenty years he had had a marked polyuria and an inordinate appetite. He was very thin. No urinalysis was made on him but, from their present knowledge of the disease, the members of his family are convinced that he had diabetes.

No other cases of diabetes are known in the family.

* * *

SUMMARY

One daughter, three sons and the father have diabetes. There is some evidence that the paternal grandfather had the disease. The mother and two daughters have shown no signs of diabetes. In the case of the father and one son the disease is apparently mild. The other three cases are of the severe type.

* * *

REFERENCES

1. Langaker, D.: Deut. Med. Woch. xxxvii, 1911, p. 217; quoted by Solomon Strouse in Abt's Pediatrics.
2. Joslin, E. P.: The Treatment of Diabetes Mellitus, Lea & Febiger, 1917.
3. Landis, H. R. M.: Tr. Ass. Am. Physicians, Phila. vol. 36, 293, 1921.
4. Pleasants, J. Hall: John Hopkins Hospital Bulletin, vol. 2, 325, Dec. 1900.
5. Osler, Sir William: The Principles and Practice of Medicine, D. Appleton & Co., 1918.
6. Williams, John R.: Amer. J. Med. Science, vol. 154, 396, Sept. 1917.

FALLACIES IN THE DIAGNOSIS OF PULMONARY TUBERCULOSIS*

By PAUL H. RINGER, A. B., M. D.
Asheville, N. C.

I AM deeply appreciative of the honor I enjoy in appearing before you this evening. Feeling that I would address a body of general practitioners, seeing tuberculosis with but moderate frequency, I cast about for a subject that would be of practical interest to men not essentially concerned in the minute details of some phase of tuberculosis but desirous of listening to a topic of broad scope and applicability.

The material of this paper has been gathered wholly from case histories, as each of the fallacies to be presented has been actually committed with regard to some patient.

The fallacies occurring in the diagnosis of pulmonary tuberculosis can be grouped under two main headings:

1. Fallacies occurring in failure to diagnose tuberculosis when present.

* Read by invitation before the Organization Meeting of the Tri-State Medical Society of West Virginia, Ohio and Kentucky at Huntington, W. Va., January 28, 1926.

2. Fallacies occurring in diagnosing tuberculosis when not present.

We shall first consider those fallacies occurring in failure to diagnose tuberculosis when present.

a. The fallacy of telling a patient who has expectorated half an ounce or less of blood that it has come from the throat.

This fallacy is the one that is of most frequent occurrence in my experience. It is difficult to understand why it should be so. We know that in the absence of any injury to or operation upon the throat, hemorrhage from this region is very rare indeed. Varicosities may indeed burst and bleed, but hardly in persons in the third and fourth decade, the period of selection for the onset of a pulmonary tuberculosis. Nasal bleeding can be easily eliminated. Nevertheless it is a fact that general practitioners and also nose and throat specialists are constantly giving patients a false sense of security by the statement that the blood came from the throat. The small early hemorrhage is often a God-send to the tuberculosis individual. It frightens him, causes him to seek medical aid at once, and, if correctly interpreted, enables him to set about the business of getting well promptly. The time has come and is already long past when this absurd and incorrect statement of blood coming from the throat should be done away with for the good of the patient and the diagnostic dignity of the physician. The old Hippocratic aphorism that "from a spitting of blood comes a spitting of pus," is as true today as upon the day it was uttered by the Father of Medicine.

b. The fallacy of not looking upon an idiopathic pleurisy with effusion as a manifestation of tuberculosis.

It has been abundantly proven both by animal inoculation and by subsequent clinical developments that pleurisy with effusion is caused in the vast majority of cases by the tubercle bacillus. The effusion arises as a result of pleural tuberculosis. A certain percentage of cases will, later on, develop definite pulmonary lesions and a certain percentage will not. A pleural tuberculosis, however, demands treatment just as much as tuberculosis anywhere else. It is all tuberculosis. Time and again, in taking the history of a patient, it is found that one, two, five or even ten years previously, he has had a pleural effusion, has been tapped or not as the case may be, but has never been given an inkling of the underlying cause. As a result, a tuberculosis process that, by proper measures, might have been nipped in the bud, has been allowed to gradually develop until it has burst forth in well marked pulmonary involvement. Not every case having had a pleural effusion requires sanatorium treatment, but every case does require careful watching, periodical physical and X-ray examination, attention to the keeping up of its general strength and nutrition together with avoidance of all undue stress and fatigue and warning as to the possibility of future development of a pulmonary lesion.

c. The fallacy of failing to examine sputum or of being content with one negative examination.

It is extraordinary how many patients report that, despite expectoration extending over many weeks and even months, no sputum examination has ever been made, or else that, one examination having been reported negative, the possibility of tuberculosis has been considered disposed of. A simple procedure, procurable free of cost in all the states of the union, it passes understanding why it is so often neglected. It is obvious, also, that if tubercle bacilli be sparse, they can but too easily be overlooked in the very small amount of sputum actually looked at under the microscope. Again, it is most frequently unknown how long the searcher has looked over the slide. One properly made negative sputum examination has this significance and no more; there are at best few bacilli present. All of us doing much tuberculosis work know how frequently bacilli are found at the third, sixth or even tenth examination. Search for the telltale organisms should be continued until certainty, beyond a reasonable doubt, is reached that none are present, and even then, tuberculosis is by no means excluded.

d. The fallacy of refusing to diagnose tuberculosis because the patient is afebrile.

There is here a fallacy within a fallacy. The patient may be judged afebrile because

no rise of temperature is observed at the visit to the physician during the morning office hours. As a matter of fact, fever may be present, even to a surprising extent. No patient should be considered afebrile unless his temperature has been taken every two hours for at least four days, the thermometer being kept in the mouth five minutes at each estimation and it being certain that the thermometer is accurate. Many a time has the patient been told: "You have no tuberculosis for you have no fever." While it will never be denied that fever is one of the cardinal symptoms of an active process, its absence will by no means exclude clinical tuberculosis. Its presence is a sign of toxemia; its absence can but be looked upon as a piece of favorable evidence.

e. The fallacy of refusing to diagnose tuberculosis because no physical signs are heard in the lungs.

Given cough, sputum, fatigue, loss of weight and the diagnosis of tuberculosis in the absence of signs pointing definitely to some other condition, is by all odds the most probable one. The physician, not particularly expert in chest examination, may miss some fine crackles after cough at one apex but he can not miss the obvious symptoms of which the patient complains. Again, slight physical signs are notoriously inconstant and even the trained ear, accustomed daily to listen to many chests, will often miss rales at one examination only to hear them clearly some days later. Physical signs in the absence of symptoms and history are of far less importance in diagnosis than are symptoms and history in the absence of physical signs.

f. The fallacy of refusing to diagnose tuberculosis because the patient feels well, looks well and says he is well.

Diogenes Laertius says: "If appearances are deceitful, then they do not deserve any confidence when they assert what appears to them to be true."

It is even so with the tuberculous. Any group of patients in the truly early stages of the disease will look, on the whole, as healthy as the well members of the community, while some individuals with fairly extensive lesions will fairly put their non-tuberculous brethren to shame by their robust appearance. It is easy to follow the path of least resistance; it is an unpleasant task to tell a fellow man he has tuberculosis; but many and many an unfortunate has started on the down hill because his physician was deceived by looks and by the patient's assertion that he feels well. Looks are as nothing when weighed in the balance against symptoms, physical signs, a positive sputum. At best they indicate good resisting power on the part of the patient, and not always that.

g. The fallacy of refusing to diagnose tuberculosis because at one visit nothing definite is forthcoming.

It often happens that patients report that the physician finding no fever, no signs in the lungs, no sputum, dismissed the idea of tuberculosis and bent his energies in other directions. Well and good, but if these other paths of investigation lead to no definite diagnosis, one must perforce return to the possibility of the presence of tuberculosis. It is often felt that one should diagnose tuberculosis promptly, "yes" or "no." It is only the man who sees very little tuberculosis that holds to this view. Those of us who deal constantly with its various manifestations know that ofttimes many days, and occasionally weeks, are needful before a definite opinion can be given. There are few more irritating occurrences than the arrival for diagnosis of a patient who has made an appointment for 2:30 and announces that he must catch the 4:45 train home. His diagnosis may take ten minutes; it may very well require ten days. Do not hesitate to go over the patient again and again before delivering a definite pronouncement.

h. The fallacy of considering a temperature as malarial unless corroborated by the demonstration of the malarial plasmodia.

This fallacy is committed mainly by those members of the profession residing in the malarial districts of the South. It needs no further elaboration and I am glad to say that in the past ten years it is being committed less and less. It is inexcusable.

I now come to the second group of fallacies, namely those involved in diagnosing tuberculosis when it is not present. The damage resulting from these fallacies is by no

means as great as that resulting from those in the first group, the latter involving in the main only loss of precious time while the former involves loss of precious health. Nevertheless, we see quite frequently patients referred with a diagnosis of tuberculosis that are found eventually to be suffering from a totally different condition. It is a fact that fallacies coming under this second group have become much more frequent during the past few years. This is a good sign, indicating that the profession as a whole is becoming more keenly alive to the diagnosis of early tuberculosis and is erring more on the side of preternaturally early diagnosis than on the side of waiting for advanced conditions before giving them recognition.

a. The fallacy of diagnosing tuberculosis solely on the report of the roentgenologist.

This is of frequent occurrence. A patient comes complaining of vague symptoms. The physician says, "I will send you over to B. to have an X-ray made." B, in many cases knowing nothing about the patient, takes the picture and makes his report, often going so far as to state "active tuberculosis." On this basis, and on this basis alone, the patient is considered tuberculous and an upheaval of his or her life ensues. It is not my intention to go into the X-ray evidences of pulmonary tuberculosis—that is a large subject. I feel very definitely however that the X-ray is merely one of the units that go to build up the diagnosis; a very important one indeed but one that should always be weighed in its relationship to the other important factors, history, physical examination, symptoms and clinical laboratory findings.

b. The fallacy of diagnosing tuberculosis in individuals, particularly young women, presenting the symptoms of under-nutrition, fever and fatigue.

This type of case is very frequent. The patient presents undernutrition which has persisted for some time, often for several years, and the onset of which has been so insidious that no definite time can be set as to its appearance. The thermometer shows a daily rise to 99.2-99.4 (the most baffling temperature that exists) and there is marked asthenia. Physical and X-ray examinations of the chest are usually wholly negative, although sometimes the roentgenologist further complicates matters by reporting "slight diffuse peribronchial thickening." In such cases, before labelling them tuberculosis, careful search should be made for metabolic and endocrine disturbances. Of course, it is perfectly possible for hyperthyroidism and tuberculosis to coexist, but then definite evidences of *both* conditions should be manifest. The duration of undernutrition, asthenia, slight fever together with negative chest findings is often so great, two, three, four years, that this very fact militates against a diagnosis of tuberculosis. Often a thyroid or ovarian dysfunction will be discovered by proper investigation which in many cases will be corrected by approximate treatment but which, alas, in other cases will not yield to any manner of therapeutics. These are among the most difficult cases that present themselves for diagnosis. Practically all these patients can be classed as potentially tuberculosis. Their tissues provide fertile soil for the development of the tubercle bacillus; yet they do not present sufficient evidences of definite disease to permit their being frankly diagnosed as tuberculosis. I am satisfied that many cases of this sort have spent months in tuberculosis sanatoria all over the country when the cause of their ailment was not the tubercle bacillus.

c. The fallacy of diagnosing tuberculosis in cases running a fever with or without the presence of physical signs in the lungs, when no Wassermann reaction has been done.

It is often surprising, and at times humiliating, when baffled for some time by a puzzling case to have the Wassermann reported four plus. All of us have hung our heads in shame at this news at some time or other. Sir William Osler well said that the man that knows syphilis in all its manifestations knows most of medicine. Too often personal acquaintance with the patient, social position, etc., deters us from having a Wassermann done. This is wrong. The spirochaete operates without regard to race, creed or color. Tuberculosis and syphilis frequently coexist. It is imperative to know of the existence of both conditions. Rarely, the phys-

ical signs heard at one or both apices, and very properly considered as evidence of tuberculosis, despite negative sputum, will wholly disappear after the administration of arsphenamin. But as a preliminary to the use of arsphenamin, the Wassermann is essential. I feel very strongly that every patient should have a Wassermann done as a routine, just as his blood pressure would be taken as a matter of course.

d...The fallacy of diagnosing tuberculosis in patients with abundant sputum repeated examinations of which are negative for tubercle bacilli.

We know, of course, that he who waits for the presence of tubercle bacilli in sputum before making a diagnosis of tuberculosis will miss all really early cases. At the same time it is important to note that persistently negative sputum examinations, when carefully made, in a patient expectorating over an ounce of thick heavy sputum, is a very potent argument against the existence of tuberculosis. If tuberculosis exists, and if sputum is abundant an ulcerated area is almost certain to be present and bacilli will be found. Bronchiectasis, unresolved pneumonia and cases of chronic bronchitis will furnish abundant sputum free of tubercle bacilli. Of course, here no reference is made to cases of lung abscess, for the foul odor of the sputum, the rather stormy symptomatology, together with the existence of definite etiological factors should make the diagnosis plain. We have, however, had more than one case of lung abscess referred to us with a diagnosis of pulmonary tuberculosis.

e. The fallacy of diagnosing tuberculosis in adults having basal lesions and negative sputum, save after prolonged observation.

For years one of the axioms of phthisiologists has been that apical lesions were to be considered tuberculous until proven otherwise, and that basal lesions were to be considered non-tuberculous until proven otherwise. This applies, of course, to the simple primary lesion. If there is an apical tuberculous lesion, a secondary basal lesion very often develops. Again, lesions spreading from and having their origin in the lung hilus may incline basally and be definitely primarily tuberculous. The isolated basal adult lesion, however, save when in the form of an acute tuberculous pneumonia, is very rarely due to the tubercle bacillus. Far more often it is a post influenzal affair, more rarely a streptothrix infection. Again, as stated above, the important facts are the persistently negative sputum and, as a rule, the excellent general symptomatology.

f. The fallacy of diagnosing tuberculosis in individuals with vague symptoms without eliminating the possibility of focal infection.

I doubt not that all will admit that focal infection has often been overdone and that there are thousands of teeth, hundreds of pairs of tonsils and scores of gall bladders that should be back whence they were taken. Nevertheless, when confronted with the two great bugbears in the diagnosis of tuberculosis, fever and asthenia, together with no definite symptoms pointing to the lungs, a careful sinus and tonsillar examination by an expert is in order and an X-ray of the entire denture should be made. We always, as a matter of routine, try to clean up patients' mouths and upper respiratory tracts in known or suspected cases of tuberculosis and, in doubtful instances it is often gratifying to see how weight will increase, appetite return and fever disappear after the removal of some definite infected focus. In the case with negative physical and X-ray chest findings, which has hitherto been subjudice, the diagnosis of tuberculosis falls to the ground with the disappearance of the symptoms for which the patient sought relief.

I have tried to cover briefly and therefore rather dogmatically some of the fallacies that have come under my notice in the diagnosis of tuberculosis. The advanced case of tuberculosis can, of course, be diagnosed by anyone. A physician is not necessary for that. It is the early case that gives trouble. Because of the commission of some of the fallacies mentioned in the first portion of this paper precious months are wasted and chances of recovery are materially lessened or irretrievably lost. Because of the commission of some of the fallacies mentioned in the second portion, nontuberculous individuals are forced to spend time and money in taking long journeys and in consulting new physicians, when care and a few simple and

inexpensive methods of examination might have cleared up the diagnosis, but as mentioned before this is a hopeful sign indicative of a thorough appreciation of the necessity of diagnosing tuberculosis as early as it is humanly possible so to do. The error, if error there is, is on the credit side of the ledger.

Problems of internal medicine in general are becoming more and more bound up in the diagnosis of tuberculosis. The stress that has justly been laid upon the importance of its early detection has caused many non-tuberculous to be branded as tuberculous. The present stumbling blocks are fever and asthenia. A careful search for the causative factors giving rise to these incapacitating symptoms will in the first place bring to light many really early cases of tuberculosis that will be saved to a long and useful life by the timely employment of suitable measures, and will, in the second place, save many suffering with other ills giving rise to the symptoms, from wasting time and money in a vain attempt to recover from a disease from which they are not suffering.

ACUTE INTESTINAL OBSTRUCTION *

By R. J. WILKINSON, M. D., F. A. C. S.
and W. C. KAPPES, M. D.
Huntington, W. Va.

IN THIS DAY of advanced medical knowledge the very high mortality rate observed in acute intestinal obstruction is appalling. A recent review of the literature reveals that the death rate remains around forty per cent, notwithstanding the fact that untold experiments have been carried out and every refinement of technique has been adopted with the idea of reducing this excessive rate. The responsibility for this deplorable condition seems to be equally divided between the physician and layman. The layman naturally procrastinates against entering a hospital and the thoughts of an operation, while the physician often fails to recognize the impending danger until the patient has become depleted of fluids, due to excessive vomiting, and the toxemia has steadily increased until it is too late for surgery to save the sufferer. There seems to be a lack of appreciation of the fact that intestinal obstruction is a mechanical problem and that surgery offers the only relief.

The symptoms of obstruction are pain, nausea and vomiting; the pain is of sudden onset, paroxysmal in character, corresponding to the peristaltic wave and increasing in severity until the bowel can no longer contract, due to a paralysis. Vomiting, which is a conservative process of nature, soon follows and persists, gradually becoming fecal in character. Visible peristalsis can often be observed early and even the distended coils of the intestines can be felt and seen in thin-walled individuals.

Differential diagnosis is interesting but in suspected intestinal obstruction we are in very little danger of going wrong by advocating early surgery, for acute perforations, pancreatitis, gall stones and appendicitis are the conditions most apt to confuse us and since all of these are surgical problems the patient has lost nothing by an early laparotomy. It is manifestly better occasionally to operate upon a patient without a surgical lesion than to delay an acute obstruction until the patient is moribund before resorting to surgery.

The following table, as given by Tuttle in a recent paper appearing in the *Boston Medical Journal* emphasizes the importance of early operation:

* Read before the Mercer County Medical Society at Bluefield, October 2, 1925.

Time from onset of symptoms to operation.	Cases.	Deaths.	Mortal'y Pct.
Less than 6 hours	13	0	0
Less than 12 hours	25	1	4
Less than 24 hours	39	7	15.4
Less than 48 hours	50	9	18
Less than 3 days	70	17	24.3
Less than 4 days	84	26	30.9
Less than 6 days	99	37	37.4

The very rapid toxemia in high obstruction is attributed to the products of the split proteoses which occur in the region before the proteoses are broken up by the erepsin of the intestinal juice. This theory may and probably does account for the varying degree of toxemia observed depending upon the level of the obstruction. However, this question is still a matter of dispute. It is intensely interesting to follow the experiments of Haden and Orr (*J. Exp. Medicine*) in which they found by animal experimentation that in intestinal obstruction there is a constantly changed blood chemistry. The non-protein nitrogen and urea nitrogen is increased while the chlorides are lowered. The fundamental change is a fall in chlorides followed by alkalosis. They believe that the fall in chloride is due to the utilization of the chlorides in the course of the intoxication and that this use is a protective measure on the part of the body. The higher the obstruction the more marked are these changes. In fact, these investigators report two cases of high obstruction (*Journal A. M. A.*, May, 1924) in which the toxemia was overcome by the repeated administration of sodium chloride, until the normal amount appeared in the blood stream. This work would seem to offer some encouragement in combatting the toxemia especially in high obstruction. To accomplish this it will be necessary to make repeated chemical analyses of the blood and administer chlorides according to the deficiency found. In a more recent paper (*Journal A. M. A.*, September, 1925) these same authorities suggest the use of one gm. chloride per kilo body weight, to be given repeatedly until the blood findings are normal. The solution can be given intravenously or subcutaneously.

It must be borne in mind that an acute ileus can give the same toxic symptoms observed in an obstruction; in fact, this condition not infrequently occurs secondary to a low obstruction and is often aggravated by the administering of purgatives before operation or to the indiscriminate use of opiates.

Several writers have recently called attention to the fact that obstruction follows acute suppurative appendicitis and that these cases are more often treated as a toxic ileus with the result that surgical relief is too long postponed in a majority of instances.

The treatment of acute intestinal obstruction, whether it be due to a strangulated hernia, volvulus, intussusception, contracting bands of adhesions, or to new growths, is essentially a surgical problem. The operation of choice must depend upon the patient's condition and the individual skill of the operator; however, it is a pretty universal teaching that in cases seen early, it is only necessary to free the point of obstruction. If the intestines are distended it is also advisable to empty the contents above the point of obstruction; this can be done by using a trochar and later closing the wound or by doing a classical enterostomy. In those cases with marked toxemia no attempt should be made to locate or remove the obstruction (the exception being a strangulated hernia); a simple enterostomy done under local anesthesia fulfills every surgical indication until the patient is in condition to withstand a more formidable operative procedure.

I cannot too strongly urge upon you the necessity for repeated gastric lavage. This should be done every four hours regardless of the question of vomiting and each washing should be continued until the water returns clear. These patients are soon depleted of fluids, consequently a very important part of the treatment is to maintain a normal fluid balance. This can best be accomplished, especially in very sick individuals, by giving saline solution intravenously, the strength depending upon the blood chemistry findings; later the solution can be given subcutaneously as well as by rectum.

Remember the after treatment is equally as important as surgery. In fact, both must be used in conjunction if the best results are to be anticipated. Acute ileus, whether accompanying obstruction or secondary to some acute abdominal inflammation, should

be considered a surgical condition and unquestionably should be relieved by a simple enterostomy before the patient becomes profoundly toxic.

A few case reports will in a measure emphasize some of the points I have attempted to bring to your attention.

CASE 1—Mr. B, white, male, age 44, boiler maker, Portsmouth, Ohio, admitted to the C. and O. Hospital, 7:00 P. M., March 7, 1925.

He gave a history of sudden cramping pains in abdomen, onset, day previous to admission; the pain became steadily worse and he was taken to a hospital in Portsmouth but refused operation. The day following he was transported in an ambulance to Huntington. No vomiting or nausea was present.

Past History: Healthy individual until September 9, 1924, when he was operated upon for bilateral inguinal hernia and while in the hospital convalescing he developed acute abdominal pain that required opiates to relieve. Discharged September 29, 1924, no diagnosis being made. Eight days after being discharged, October 7, 1924, he was readmitted to the hospital suffering with acute abdominal pain, pulse, 100, respiration 24, leucocyte count 18,000, polys 84, lymphocytes 13, eosinophiles 3, urine, abundant pus cells. At this time there was marked muscular rigidity and the patient was vomiting repeatedly. Operation revealed a generalized inflammation of intestines without our being able to ascertain the cause. The abdomen was freely douched with saline solution which was later removed by suction. The appendix was removed but there was no demonstrable pathology. The wound was closed in layers. Recovery was uneventful. Discharged on October 29, 1924, and patient resumed his duties as boiler maker within six weeks. He remained well until onset of present illness, March 6, 1925.

Examination: Reveals man who is profoundly toxic, pulse very weak and rapid, temperature subnormal. The abdomen is board like with marked tenderness over the entire area; chest normal; heart rapid; otherwise normal.

Laboratory Findings: Blood: no record. Urine: slight trace albumen, sugar negative, 2 hp pus. Immediate laparotomy advised.

A quantity of bloody fluid escaped upon opening the peritoneal cavity. The small bowel (jejunum) was found to be gangrenous for a distance of 63 inches due to a volvulus. A rapid resection with end to end anastomosis was done. On account of intestinal distention above the volvulus it was decided to do an enterostomy in addition to the resection. During the operation 500 ccs of saline solution with 15 drops of adrenalin chloride was given intravenously. Intravenous saline was again administered in four hours. Later 1000 ccs saline (normal) was given subcutaneously. Gastric lavage was immediately done and ordered repeated every four hours.

The blood chemistry (examination by Dr. F. C. Hodges) shows the non-protein nitrogen 180 mg. per 100 ccs. The chlorides were not estimated. After each saline injection marked improvement was noted. The wound became infected on the eighth day requiring removal of stitches. Fecal fistula developed at the site of enterostomy opening on the seventh day. The patient was discharged from the hospital on April 17. He resumed duty about August 1, 1925, apparently in perfect health. At present time patient is in good health except for the fact that certain foods seem to pass through him undigested.

CASE 2—M. D., white, male, age 22, fire cleaner in round house, admitted to the hospital February 13, 1925, at 8:00 P. M. Family and past history unimportant except patient states he has noticed lump in left groin once or twice but this was easily reduced.

Present Illness: On night of February 11, 1925, while patient was pulling clinkers out of fire box on engine he felt a sudden sharp pain in left inguinal region. The appearance of a persistent lump was concomitant with the pain and sickening sensation was felt. Lump could not be put back as before. Shortly after appearance of lump patient became nauseated and vomited greenish fluid, this later becoming dark and fecal in odor. The pain was constant and increasing in severity, requiring opiates for relief. Patient was given Epsom Salts and numerous enemata before admission but without results.

Examination: February 13, 1925, shows

well nourished white male, lying in bed, very restless, suffering intense pain, nauseated and vomiting stercoraceous material, severely shocked. Heart and lungs normal but pulse rapid, 112 per minute, and of poor volume, respiration 24. Pain over whole abdomen but not markedly tender. Palpitation over left inguinal region reveals a small firm mass which is tender. With finger in left inguinal canal there is a faint suggestion of a small soft mass fluctuating on cough, high up in canal. Examination otherwise negative.

Urine: Dark amber, clear, acid, 1040, albumen and sugar negative, 1 hp pus, abundant mucus. Temperature 98, pulse 118, respiration 24.

Blood: WCB 9,960, polys 76, SL 2, transitional 4.

Impression: Hernia, inguinal, left, strangulated, producing obstruction. Operation advised. Prognosis bad.

On opening abdomen considerable free fluid, serous in nature, was revealed, intestines dark red and considerably congested. From the left internal ring a knuckle of the ileum was released and allowed to fall back into abdominal cavity. Abdominal cavity was flushed out with saline and wound closed in layers without drainage. Preoperative gastric lavage was done which revealed a large amount of dark greenish fluid, fecal in odor. Immediately postoperative gastric lavage was done and repeated every four hours. Three hundred ccs normal saline with fifteen drops of adrenalin chloride solution was given intravenously and subcutaneously at intervals. Morphine 1/6 q4h.

The patient never rallied but became more toxic and died February 14, 1925, at 4:10 P. M., 32 hours after admission.

Non-protein nitrogen, urea and blood chloride estimation were not done on this patient but we venture to say that the retention of the non-protein nitrogen and urea nitrogen and the fall of chlorides was marked (in view of Hayden and Orr's recent experiments). This case clearly demonstrates the danger in delaying operation where intestinal obstruction is suspected.

CASE 3—Mr. C., white, age 50, conductor, admitted to the hospital February 11, 1923. History of having taken suddenly ill while on the road. Acute abdominal pain marked the onset, which was soon followed by nausea and vomiting. He returned home and was given the usual course of calomel, oil and enemata, but without results. On the third day all pain ceased but vomiting continued. He was advised by the family physician to enter hospital.

Examination: Revealed rigid abdomen with marked tenderness over McBurney's point, otherwise negative. Temperature normal, pulse 100, respiration 20. Blood: 15,400 leucocytes with 82 polys; urine negative.

Diagnosis: Appendicitis. Immediate operation done. The appendix was post-cecal and gangrenous with a moderate amount of free pus in cavity. The appendix was removed. All pus was evacuated by suction and two cigarette drains inserted. Patient's temperature 102 next day, pulse 100. Gastric lavage relieved the vomiting. Recovery uneventful until seventh day when patient became ill, pulse 135, vomiting continuously, abdomen distended. Diagnosis of obstruction made and operation advised.

Under novocaine anesthesa a left rectus incision was made and the first distended loop of bowel was delivered and after placing purse string suture a moderate sized catheter was introduced, the intestine being anchored to the incision by two fine linen sutures. Wound closed around tube. The effect was immediately noticeable. On the ninth day the temperature was normal, pulse 100, all vomiting ceased and the patient was ordered on liquid diet. He made an uneventful recovery. The bowels moved normally on the 17th—ten days following the enterostomy. The fistula closed spontaneously within four weeks.

CONCLUSIONS

1. Intestinal Obstruction is a surgical problem and every hour's delay in bringing these cases to the operating room is costly. The physicians must awaken to their responsibility and the public must be educated so they may better appreciate the impending danger if the high mortality rate is to be lowered.

2. Early operation; intravenous saline solution before, during and after the operation; gastric lavage repeated every four hours; enterostomy for acute ileus whether accompanying an obstruction or secondary to an abdominal inflammation.

THE CHIEF CAUSES OF UTERINE HEMORRHAGE AND THEIR TREATMENT *

By EMIL NOVAK, M. D.
Baltimore, Md.

A DISCUSSION of the symptoms of uterine hemorrhage must of necessity make more points of contact with the field of gynecological pathology than any other which might be selected. In a general way we have been accustomed to consider abnormal uterine bleeding under two heads, menorrhagia and metrorrhagia. In the case of the former, the excessive menstrual hemorrhage obviously represents an aberration of the normal menstrual mechanism. A familiarity with the modern conception of menstrual physiology is a *sine qua non* to a proper understanding of the mechanism involved in the abnormal types. Menstruation in itself is a form of uterine hemorrhage, representing the only example in the body of a perfectly physiological type of hemorrhage. In cases of intermenstrual bleeding the fundamental importance of a knowledge of the normal physiology is not quite so obvious, or perhaps so great as with menorrhagia, but even so it may be accepted that it forms the natural point of departure in the study of all menstrual disorders.

It would be interesting, if time permitted, to review the advance in our knowledge of the menstrual phenomenon from the early era of superstition and folk lore up to the present day. Certainly it may be said that more real knowledge on this subject has been acquired in the past quarter century or so than had been accumulated in many centuries preceding. The basis of our present day conception is that menstruation is due to an internal secretion produced by the ovaries. There is still much discussion as to the constituent of the ovary responsible for this secretion. There is little doubt that both the follicles and the corpora lutea are important in this respect. Each month, at about the thirteenth or fourteenth day of the menstrual cycle, *i. e.* about ten days after the average menstrual cycle, a mature Graafian follicle discharges an ovum, which soon enters the tube and begins its passage toward the uterus.

In the meantime the endometrium begins to prepare for its possible implantation by undergoing a slow developmental process, so that it is never the same two days in succession. This gradual hypertrophy is almost surely due to the endocrine influence of the growing follicles. In the meantime the follicle from which the ovum escaped has become a corpus luteum, which now likewise begins to grow larger and larger, becoming mature several days before the date of the next period. At this time the endometrium, under the influence of the corpus luteum, undergoes a striking transformation, showing for the first time definite secretory activity, while thickening, edema, and increased vascularity are marked. In other words, it is very much like young decidua. The purpose of this change is evidently to prepare for the reception of a possibly impregnated ovum. If the ovum has indeed been fertilized, the hypertrophic endometrium remains and becomes real decidua. If, on the other hand, the ovum dies before fertilization, the corpus leteum at once begins to retrogress and the endometrium is in large measure cast off, with the accompaniment of hemorrhage. Menstruation is thus to be looked upon as a dismantling process evoked by a failure of fertilization of the ovum.

One of the really epochal contributions of

* Summary of illustrated address before the West Virginia State Medical Association, Bluefield, June 12, 1925.

recent years was the demonstration by Hitschmann and Adler that the endometrium passes through a remarkable cycle of histological changes at different phases of the menstrual cycle. We now know that histological pictures which were formerly considered distinctly pathological are merely normal variations, and without a familiarity with these physiological variations one would be at sea in the microscopic examination of curettings.

In a previous paper I suggested that cases of abnormal uterine bleeding might from the standpoint of etiology be grouped under three heads, as follows:

(1) Those due only to definite anatomic disease in the pelvic organs. This group is best represented by such destructive lesions as cancer, in which the bleeding is due to actual breaking down of tissue and opening up of blood vessels. In other words, it occurs irrespective of the physiological factor of menstruation, being due to the same factors which cause bleeding from cancers in other parts of the body.

(2) Cases due to combined anatomic and physiologic factors. There is a large group of cases in which bleeding, as in the group just considered, is associated with the presence of definite pelvic lesions, which obviously are of some importance in causing the symptom. On further study, however, it will be seen that some additional factor, and that a physiological one, must be invoked to explain the bleeding. The best illustration of this type is furnished by the ordinary form of chronic pelvic inflammatory disease. The statement has usually been made that this condition causes bleeding because of the pelvic congestion which it entails. If this alone were sufficient, however, one would expect to have bleeding more or less continuously, which is certainly not the rule. Furthermore, in the most acute forms of inflammatory disease, where the congestion is most intense, menstruation is not only not excessive, but may be absent altogether. Recent studies have seemed to indicate that the cases in which bleeding is present are those in which the ovaries are definitely involved in the disease, and that the bleeding is therefore in part at least of functional nature. In other words, both structural and functional factors are here concerned.

(3) Cases in which the bleeding is due to a pathologic physiology alone. In the majority of cases of abnormal uterine bleeding, pelvic lesions are to be found, so that the first two groups are certainly the most numerous. This is contrary to the findings with amenorrhea, where a constitutional or endocrine factor is much more frequent than a local one. There is a not inconsiderable group of cases in which uterine hemorrhage may be present even though the most careful examination of the pelvic organs, either before or at operation, shows no gross abnormality. In these, as will be discussed below, the bleeding is presumably of purely functional origin.

A discussion of all the causes of uterine hemorrhage would of course be impossible within the limits of a single short paper. It has seemed to me wiser to touch briefly upon a few of the causes which are especially important or which illustrate the general principles we have been discussing. The lantern slides which will be shown may help to clarify this presentation.

Conditions Associated with Pregnancy. With the obstetrical forms of hemorrhage we are not here concerned, but a very large group of cases is encountered as a sequel of pregnancy or as an accompaniment of certain abnormal forms of gestation. If any large group of cases of abnormal bleeding be analyzed, the cause which would almost surely be found most numerous is incomplete abortion. Spontaneous miscarriage is frequent enough, but the great frequency of induced abortion nowadays adds vastly to the number of cases of post-abortive hemorrhage encountered by the practitioner. Speaking generally, the persistence of the bleeding is indicative of a retention of embryonic tissue. The passive retention in itself may be associated with much less bleeding than is seen when the uterus attempts to expel the contents. At this time large blood spaces may be opened up and bleeding may be profuse, whereas previously there had been little or perhaps none. I have seen a large placental cotyledon retained for many weeks after delivery without much bleeding,

pain, or discharge, but with the occurrence of severe hemorrhage when finally the uterus attempted to expel it.

The presence of placental tissue is not of course *per se* an indication for its operative removal. Indeed, gynecologists are coming more and more to the practice of non-interference in such cases. In certain cases I feel that gentle evacuation is still the better plan, as where non-interference may mean persistence of bleeding for many days or weeks. The long disability which is thus entailed is enough in itself to justify the procedure in certain such cases of the non-septic type. There are of course many other aspects of this broad question which can not be here discussed, but it may be repeated that curettage in such cases is usually unnecessary and often harmful.

Tubal pregnancy, formerly looked upon as a rarety, we now know to be extremely common. The practitioner who is alert to its possibility will least frequently fail to diagnose it. Bleeding is present in most cases, but not in all. It may or may not follow a period of amenorrhea. Often there is an actual anticipation of the menstrual date, rather than a delay. Usually the bleeding is of the scanty, "spotting" type, but it may be fairly free. It is initiated by the death of the embryo, as I have elsewhere discussed. When amenorrhea is present in a case of tubal pregnancy, therefore, it may be assumed that the embryo is still living. Bleeding of the type above described, together with the presence of a tender unilateral mass, should always make one suspect the existence of a tubal pregnancy. One should not attach too much importance to absence of the signs of free abdominal hemorrhage, for this is present in only a small proportion of cases, the so-called tragic or cataclysmic type.

Two forms of abnormal pregnancy, hydatidiform mole and chorioepithelioma are commonly associated with bleeding, but as they are relatively infrequent, I shall not stop to discuss them here.

Neoplasm. By far the most important cause of uterine bleeding is cancer, because of its dire possibilities to the patient. Much the most frequent type is squamous cell carcinoma of the cervix, and in this slight bleeding is likely to be an early symptom. It often occurs after defecation, coitus, or severe exertion. There are a few cases in which bleeding, or, for that matter, any other symptom, may not appear until the disease is rather far advanced. Such patients are not given a chance at early recognition, however much they may have been touched by the anticancer campaign. The importance of immediately heeding bleeding when it does occur, however, can not be too strongly emphasized.

The recognition of adeno-carcinoma of the body of the uterus is somewhat more difficult, because it is beyond the reach of simple inspection and palpitation. It usually occurs in women who have passed the menopause. Bleeding at this time should mean a diagnostic curettage, with competent microscopic examination of the tissue. The diagnosis rarely presents any difficulty.

Other well known neoplastic causes of bleeding are myomata, polypi, adnexal tumors, etc. These are all shown by the accompanying slides, but they need not be elaborated upon here.

Inflammations. The same may be said of inflammatory disease of the pelvic organs, particularly the common forms of adnexitis. The bleeding so often associated with this has already been discussed as presenting a combination of structural and functional etiology.

Functional Bleeding. The form of bleeding which is most difficult of explanation is that which is seen in patients who present no demonstrable gross abnormality of the pelvic organs. This is a relatively large group of cases, which has been much discussed in the literature under such designations as functional, idiopathic, essential, intrinsic, etc. Furthermore, it is quite certain that many cases of bleeding which have been explained on the basis of myopathic change and arterio-sclerosis really belong to this group of genuinely functional cases. Most frequently bleeding of this variety occurs at or near the menopausal age. It is not infrequent in young girls at or shortly after the inauguration of the menstrual function. It may, however, be observed at any age during

menstrual life, though in a general way it is limited to the latter.

The bleeding most often takes the form of excessive and prolonged menstruation, but more or less continuous uterine bleeding is not unusual. It is not characteristically associated with pain. When such bleeding is encountered in women during the cancer epoch, as it so often is, its importance becomes great, because of the obvious necessity of distinguishing it from the bleeding of cancer. This differentiation is usually comparatively easy. The common cervical form of cancer, *i. e.* squamous cell carcinoma, can ordinarily be readily diagnosed by inspection and palpation, aided by microscopic examination of a clipping if necessary. The internal forms of cancer, more particularly adenocarcinoma of the body, can not be diagnosed without diagnostic curettage and careful microscopic examination. Often in these doubtful cases, one will be gratified to find that there is no sign of cancer, but that the uterine mucosa shows a very characteristic picture which we have come to associate with functional bleeding. This is the condition, first described by Cullen, and designated as hyperplasia of the endometrium. This has been fully discussed in previous papers, and I shall not here review its pathology. It is so distinctive that it can often be recognized at a glance through the microscope. The fact that it occurs only during the era of ovarian functional activity, that it, like the bleeding, often recurs after curetting, that both the bleeding and the hyperplasia disappear after removal of the ovaries or radiotherapy—these and other considerations leave little doubt that the bleeding and the associated endometrial change are not related as cause and fact, but that both are due to the same underlying cause, a disturbance of ovarian function. Incidentally it may be added that the ovaries of such cases show as rather characteristic changes an absence of *corpora lutea* and the presence of a large number of ripening follicles.

A final word may be said as to the management of such cases. This will be done in only a summarizing fashion, as the question has been more fully considered elsewhere. Mild types, especially those seen in young girls, may tend to spontaneous correction. When severe enough to cause concern, a curetting is indicated to establish the diagnosis, which is easy when hyperplasia of the endometrium is found, as it is in the largest number of cases. Occasionally, it may be lacking, though in such cases one must be doubly sure that no obscure anatomic cause for the bleeding, such as a small fibroid or a polyp, is being overlooked. The curetting usually relieves the bleeding, in some cases permanently, but in a large proportion, probably at least one half, only for a time. If bleeding recurs, or even before this, organotherapy is a rational though usually not brilliantly successful measure. Corpus luteum therapy is theoretically indicated. The preparation should be one containing the lipoids, and should be suited for intramuscular injection. The results with the commercial extracts now available, have been very disappointing, but it is probable that the time will come when really potent preparations will give far more striking results.

Thyroid therapy, especially in cases showing definite evidences of hypothyroidism, is at times of value, and so is the hypodermic employment of posterior pituitary extracts. Indeed, I have gotten better results with the daily injection of pituitary extract than with any other form of organotherapy. The problem now is one which concerns the biochemist and the manufacturer, for the failure of organotherapy is probably due chiefly to lack of potent extracts, rather than to faulty reasoning as to their indications.

In women at or near the menopausal age, and where preservation of the reproductive function need not be considered, the problem is an easy one, once the diagnosis has been made. Here radiotherapy finds one of its most valuable indications, for the bleeding can be checked with almost absolutely certainty. Radiotherapy in young patients is not to be so lightly advised, as there are still certain considerations which make it undesirable except as a last resort. Given competently and in properly small dosage, the risk of unfortunate sequelae, such as perma-

nent sterility, is probably not very great. The alternate plan, aside from the organotherapy already spoken of, is a repetition of the curettage, perhaps several times, at such intervals as recurrence of the bleeding may necessitate. Each case must be judged on its own merits, with a full consideration not only of the medical problem involved, but also of the social and economic factors presented.

Hysterectomy is now rarely necessary for functional hemorrhage *per se*, although at times, especially when other indications are present for laparotomy, it is a perfectly proper procedure in the case of women at or near the menopause.

OCCIPUT POSTERIOR PRESENTATIONS AND THEIR TREATMENT *

By WALTER W. POINT, A. B. M. D.
Charleston, W. Va.

[In preparing this subject, reference was made freely to articles by Paul T. Harper, M. D., F. A. C. S., Albany, N. Y., and A. H. Bill, A. M., M. D., Cleveland, Ohio, appearing in Gynecology and Obsetrics.—THE AUTHOR.]

SELECTION of the above subject was decided upon because of the conviction that this condition is far more frequently encountered than many authorities would have us believe; its successful treatment presents more variable difficulties; and the responsibility of a happy end result is greater perhaps, than any one other abnormal condition met at delivery.

Undoubtedly, a very large percentage of all cases would show, near term or in the beginning of labor, an occiput posterior presentation. They are cases in which this condition is a primary one. However, the majority of such cases luckily subsequently rotate anteriorly and are classed as normal. The remaining cases either fail to rotate to a normal position and thus become persistent occiput posterior presentations or, if an attempt is made to rotate anteriorly, the process is not completed.

At first thought, it is but natural that the frequency of the condition is underestimated. Statistics tell us that the occiput anterior is found in from 75 percent to 93 per cent of all cases but as stated above, a great majority of the primary occiput posterior cases rotate anteriorly and are diagnosed only as such. Another source of probable error is the fact that some statistics are based upon observations as to the direction and extent of restitution. Unless the shoulders are engaged at the time of the beginning of anterior rotation naturally restitution takes place only through an arc of 45 degrees and it is classed as an occiput anterior, while if they are engaged at the beginning of rotation restitution will obviously take place through an arc of 135 degrees.

Since it is intended and hoped that this paper should be a practical one it is deemed unnecessary to further consider the primary occiput posterior presentations except in that each case in this class must be regarded as a possible persistent occiput posterior. The need, therefore, for careful, intelligent examination at the beginning or early in labor is very apparent.

Just a word here as to some of the causes of occiput posterior presentations. DeLee mentions the following: (1) flat pelvis in minor degree; (2) pendulous abdomen; (3) large pelvis with small child; (4) prolapsed arm in front of occiput; (5) placenta, tumors of uterine wall, scars of uterine wall, a distended rectum or bladder; (6) exhaustion of powers before rotation is accomplished; (7)

* Read before the Kanawha Medical Society at Charleston, December 15, 1925.

funnel pelvis; (8) abnormal pelvic floor. To these may also be added the right lateral posture so commonly assumed by the mother during the latter part of pregnancy. Since it is a well known fact that the fetus is heavier than the fluid in which it lies, assumption of this position by the mother naturally tends to cause the body of the fetus to sink towards her right flank with the resultant tendency on the part of the occiput to follow to the posterior position.

Passing to the mechanism concerned, let us remember that deflexion is the most prominent characteristic of this abnormal condition. Deflexion means the bending backward of the presenting part. Consequently the degree of flexion may be accurately measured by the location in front of the occiput of the caput. When the chin leaves the chest, the anterior chest is brought forward and fetal heart sounds may be distinctly heard in the location normal for anterior positions. This often makes an improper diagnosis probable if the location of the heart sounds is made the chief diagnostic point. Since anterior rotation requires more or less eccentricity, deflexion makes the advancing pole concentric and despite the fact that the pelvic floor exercises its anteriorly-directing force properly and the uterine contractions are efficient, rotation does not occur and the presentation remains a persistent occiput posterior.

If the presenting part becomes engaged in sufficient deflexion, the elongation of the head is so marked that physiological forces concerned cannot rectify the malposition. Even if flexion is accomplished manually, the elongation causes the head to again assume its deflexion attitude when the hand is removed. Obviously the time to flex the head near the inlet is before or just after molding has begun. Early diagnosis at this stage depends largely upon two findings. First, the palpation of the feet just above and to the left of the umbilicus (I am using the right occiput posterior as an example) and secondly, the location of fetal heart sounds equally as strong in the flank as they are anteriorly. With these two physical signs elicited, palpation of the presenting part for detection of deflexion to explain the auscultatory findings will usually give a positive check on the diagnosis.

With the head in mid-pelvis, if it is well flexed from uniform resistance encountered, moulding and caput formation help it to pass on through and to often rotate to the anterior position. But if deflexion has occurred at the inlet, moulding is less pronounced and the head reaches mid-pelvis where its ample size invites deflexion. A most important physical sign at this point is the position of the cervix. The posterior portion is further back and can be felt hanging loosely away from the occiput while the anterior segment is longer and extends lower on the anterior portion of the presenting part. By this time enough dilation has occurred for the introduction of one or two fingers but the caput usually masks all fontanelles and sutures so that we must depend upon abdominal signs as outline dabove.

Normally when the fetal head nears the pelvic outlet two very important phases in mechanism occur—full dilation and anterior rotation. A well-flexed head makes the advancing pole eccentric and consequently favors rotation. Necessary aids in this part of normal mechanism are efficient uterine forces and the normal pelvic floor tone. Since a posterior occiput always means deflexion, the uterine forces become exhausted especially when the membranes rupture prematurely and since dilatation is dependent entirely upon uterine forces, dilatation ceases before it is complete. As a result, anterior rotation ceases and usually continued contractions cause the head to descend deep in the pelvis in a position known as "deep transverse arrest." This is evidenced often by the appearance of the caput at the outlet with its failure to advance with the persistence of efficient propulsive contractions. At times, nature finally substitutes another method in place of anterior rotation. The occiput rotates a very short distance to the hollow of the sacrum the position thus becoming occipito-sacral with the birth of the infant occurring in that position.

Treatment of the occiput posterior is both preventive and active. Prophylactic measures are of value when the presenting part is unengaged. If the fetal back is located in

the mother's right flank and the mother is accustomed to the right lateral position in rest, she should be directed to assume the left lateral position which tends to change the position of the fetus and favors engagement in the anterior position. Suitably placed pads in the corset help to maintain this favorable position when the mother changes to the upright posture. If engagement fails to occur, look for some other abnormality. If engagement occurs with the occiput posterior, keeping the patient in bed in the left lateral position may result in enough anterior displacement of the back to assure its descent with anterior rotation.

Posterior occiput cases are noted for their slowness in dilation of the cervix. When this occurs active treatment should be instituted to relieve the attendant retraction of the lower segment and to hasten dilation rather than to secure a change in the position of the presenting part. Here careful manual dilation under anesthesia is valuable. Other cases progress very satisfactorily if only morphine and atrophine are given, these drugs allowing sufficient relaxation to occur and thus causing the retraction to be relieved with advance of the head.

Given an arrest at the inlet, or even in high mid-pelvis, with an inadequately thinned out lower segment, internal podalic version, preceded by complete dilation and thorough ironing out of the perineum, followed by breech extraction is undoubtedly the procedure of choice provided a vaginal delivery is not contraindicated.

With the head in mid-pelvis postural treatment may still be of value if the shoulders are not engaged. At this point retraction and incomplete dilatation with rupture of the membranes frequently occurs. Deep anesthesia with manual dilatation is strongly indicated.

With the head at the outlet postural treatment avails nothing because the shoulders are engaged. Rather, manual dilatation, stimulation of pains and attempts at securing flexion are to be used.

Attempts at manual rotation of the posterior occiput are useless in the presence of incomplete dilatation and the use of pituitrin here is also contraindicated. Deep anesthesia with careful manual removal of any obstruction on the part of the uterine forces followed by forceps, provided the uterine forces are exhausted, is the method of choice. In some cases one of the ischial spines keeps the flexed head from rotating. A finger in the rectum can hook the occiput forward and allow rotation to be completed. However, if deflexion in sufficient degree is present, the occiput is so far posterior and so high that the finger cannot reach it and the maneuver is useless.

If occiput posterior persists after complete dilatation has occurred, instrumental rotation may be the best treatment, care being exercised not to exert traction until complete rotation has been secured. Just a word here as to some of the most important points in the technique. *First,* complete dilatation is necessary before the Scanzoni is attempted. *Second,* no traction should be exerted until rotation has brought the sagittal suture to the anterior-posterior diameter of the pelvis. *Third,* an accurate cephalic application should always be made. *Fourth,* rotation should be made with the handles describing a large circle instead of merely twisting the handles. *Fifth,* do not remove blades until rotation is complete. To do so invites the occiput to return to its posterior position. *Sixth,* when rotation is complete exert traction enough to fix the head in its new position. Remove the blades and reapply as in a normal occiput anterior. *Seventh,* always reapply the posterior blade first to support the head and to guard against pushing the occiput back into its former posterior position.

In my practice I have encountered twenty-seven posterior occiput presentations in a series comprising one hundred and forty-four cases. Of the twenty-seven cases, sixteen were delivered by internal podalic version and breech extraction after complete dilatation and thorough ironing out of the perineum. Seven were delivered by the Scanzoni maneuver; one was delivered, I am sorry to say, with the occiput-to-the-rear resulting in an extensive second degree tear and a well defined case of Erb's palsy which

completely disappeared under treatment. The remaining three cases were easily rotated to an anterior position by manual methods. On the part of the mother, nine incurred lacerations, three of which occurred during the extraction of the after coming head. On four of the remaining six episiotomy was done and I want to emphasize here the distinct value of this procedure, both from a standpoint of shortening labor and because subsequent repair is much easier and much more satisfactory. The remaining two were lacerations of second degree which occurred because I put more confidence in the flexibility of the perineum than I should.

Other than lacerations there was no morbidity among the mothers except in one case which developed influenza two days later and made an uneventful recovery. One baby was a still-born due to inability to extract the after coming head following version.

To summarize, the attitude of the obstetrician towards these cases should be one of active expectancy with the realization that the patient is having a long, tiresome and very painful labor which he can materially shorten and ameliorate if he assists nature at the proper time and in the proper way demanded by the individual case. This means the judicious use of morphine and atropine which bring a decided relief from pain and, as evidenced by such relief, relaxation of the lower segment with its consequent quicker dilatation. This is followed by one of the methods of intervention indicated in the individual case. I know of no condition in obstetrics which, if properly and humanely handled, elicits more sincere gratitude and heartfelt appreciation on the part of the patient, her family and friends.

SOME PROBLEMS OF THE WEST VIRGINIA BOARD OF EXAMINERS FOR REGISTERED NURSES *

By FRANK LEMOYNE HUPP, M. D.
President of the Board

TO HIS EXCELLENCY, Governor Gore, Madam President and members of the West Virginia State Nurses Association, friends and co-workers:

As presiding officer of the West Virginia Board of Examiners for Registered Nurses, I wish to acknowledge with gratitude the gracious courtesy and privilege you have extended to our Board to bring some of the problems of mutual interest to those of us who have to do with the education of the nurse.

I need not tell you that as co-workers in a common cause our highest aspirations are to so standardize the teaching and elevate the requirements in our West Virginia training schools, that the graduate will not only match up with any nurse in the country, but that it will be considered a badge of the highest honor and distinction for other states and the Dominion of Canada to receive our applicants by reciprocity.

From that sympathetic genius, Florence Nightingale, to the lamented Edith Cavell, from the inception and organization of your splendid association on down to the present day, your self-sacrificing activities, your praiseworthy aims and purposes have been along humanitarian lines. The fundamental and nuclear thoughts of your organizers have been in assuaging the suffering of your brother man, healing and relieving the broken in body. The translating of the sacred message and teaching of the Sermon on the Mount, as preached by the Lowly Nazarene, into tangible realization, and that other ful-

* Address before the State Association of Nurses, at Clarksburg, September 25, 1925.

fillment of correlating your energies with those of the disciples of Esculapius. How well you have succeeded in elevating the nurse out of the purely occupational classification into that of a true and noble profession, every person who has received your ministrations when in trouble, knows.

I am sure I am addressing some of you who have been trail blazers in the impenetrable wilderness, whose privilege and function was to establish that order out of the chaos necessary to reach up to present day attainments. How many of you have been pioneers in bringing your profession in West Virginia up to its present high professional level. How well we know that some of you have been in this work to our Little Switzerland of America what Florence Nightingale was to the land of the Britains, or what Mollie Pitcher and Clara Barton were to the Empire State of New York. It is for you younger lieutenants in the field to receive the flaming torch and hold it high, to take up this pleasurable task without a drag in the anchor, and what these pathfinders found glass and made crystal it is your sacred duty and privilege to receive crystal and make pearl.

As a humble member of the medical craftsman, I am here to reiterate the words of my friend, Dr. Matas, that the entire profession of medicine stands ready to aid you, heart and soul, to more effectively shape and level the rugged path which must be traveled before you can possibly reach the peak among the clouds which you have set out to conquer, as the resting place of your legitimate ambitions.

To quote further from the New Orleans savant: "We are happy in the reflection that you are, by virtue of your calling, a dependent or integral part of our profession of medicine, a profession with which your destinies are inseparably linked from its very beginning, and because your guild sprang into existence in response to the same social and humanitarian instincts, impulses and necessities that gave birth to the healing art."

On behalf then of the men of medicine of this commonwealth, and as an ex-president of the State Medical Association, I wish to pay the highest tribute of praise and the homage of our profound admiration for your monumental vision, your unflagging industry, your whole-hearted devotion to a principle.

But do not deceive yourselves, or for a moment feel that the pinnacle of the Matterhorn of your ambitions has been reached; you are only at the threshold of infinite possibilities and achievements.

Dr. Albert T. Lytle, in a recent argument for the nationalization of the agencies concerned in the health-welfare of the people, aptly remarked: "However much it may be decried, the fact remains that, like all other social movements, methods caring for the health-welfare of the people change with the changing order. The venerable well-established, individualistic system of sickness-service, since its establishment, has changed but little with the progress of civilization. This system is now inadequate to properly care for the abnormal health and sickness situation of modern life. This inadequacy is shown by evidences found both within and without the activities of the professions."

The principal evidences found within are (1) progressive increase in preparation requirements for entrance to the study of the professions; (2) progressive increase in professional requirements for obtaining the right to practice the profession; and (3) gradual assumption by the state of control over the preparation for the entrance to full professional privileges.

This argument brings up the burning question of whether it would not be a wiser and a more practical procedure to so change or amend the state law that would permit the student nurse to finish her course in two and a half years, thus avoiding the repetition of service, and permitting the graduate nurse, by reason of this extra time, to pursue some course along special lines, with a view to a special degree, whether it be as executive, social service, specialization in surgical work, or as an expert anaesthetist. I am, after the most careful reflection, definitely pledged to this departure, and firmly believe that our state is ready to make the change. It is in no sense a retrogression, nor is it an experiment, as it has been accepted and is operative in several of the large hospitals of the country. I trust that your council will

seriously consider this suggestion, from every angle, and have a committee come before a future meeting of this association, with such recommendations as it may deem wise. The argument that this innovation may diminish the number of nurses for active service in the field is in no wise tenable. It has been definitely demonstrated that many high school students and graduates now hesitate at the threshold of nursing opportunity because forsooth of the length of the course. The workers in the vineyard are altogether too few at the present time, and any suggestion that may lead to an augmentation of your forces certainly should be entertained and welcomed, as long as it is in no wise prejudicial to present standards. The people of this nation will continue to suffer sickness and will fall by the way, and you God-selected women have pledged your devotion to nursing them back to health. Think you for a moment the vast army of incapacitated dependents will grow less, or that there will be less demand for active bedside service?

Dr. W. S. Rankin, president of the American Public Health Association, at a meeting not very long ago stated that of the 110,000,000 people in this country, only 37,500,000 are fairly healthy, and only 19,500,000 in full vigor, leaving 53,000,000 in subnormal condition. Again, H. A. McClure, lieutenant commander of the United States Navy, in a circular letter for the Navy department, issued in February, 1920, states: "From 100 average healthy men taken at the age of 25, 36 will be dead before 65; 1 will be rich; 4 will be wealthy; 5 will be supporting themselves by work; and 54 will be dependent on relatives or charity."

The Saturday Evening Post of March 6th, 1920, under the title, "Medicine in Industry," makes the statement that an investigator recently studied ten industries where medical examinations prevailed, and showed "that of approximately 120,000 applicants investigated in one year, only 66,000 proved to have no disabilities of any consequence. Nearly 12,000 applicants were wholly rejected, and 41,000 were employed with full knowledge of their disabilities."

All of which demonstrates that your activities will ever continue to multiply.

Many times I have been asked by a superintendent or directress of nurses to point out the weak links in the chain of our state nurses' educational system, or to have the board offer or suggest any constructive criticism that may strengthen the warp, woof and texture of the fabric of which the teaching policies are composed, and which might spell higher standards, better timber and personnel of those making up the pupil contingent of our state.

In answering these questions, my friends, or in attempting to solve some of the difficulties like these, and many others, which have confronted us, the board, if truthful, must needs be tactful, or subject itself to the charge of being personal. However, there are some obvious shortcomings, many sins of omission and commission, and too often examples of neglect, abortive efforts on the part of some institutions to perfunctorily turn out half-baked nurses, and all of these might well be threshed out before a body of graduate nurses, many of whom are occupying exalted positions as directors or teachers.

How often some institution, in its desire to fill its quota of probationers, will receive these applicants under age, and unprepared, in some of whom the preliminary education has been less even than the eighth grade, and woefully neglected at that; in some these primitive minds are in no fit shape to receive, understand or to assimilate facts or fundamentals, no matter how simply taught. One school recently sent up eight students before the board, not one of whom had ever been in a high school. Many of these undesirables should never have been received, no matter what the emergency. Or if these pitiful one-tracked brains are permitted to embark on their ever limited development, they should never be permitted to pass the two month probation period, but be tactfully "busted out" or aborted in embryo.

The board wishes to emphatically go on record as stamping as a crime any school allowing young, pseudo-ambitious and unsuspecting girls to drag through three long years of laborious drudgery, and then have the temerity to send them up for examination, with the expectation of receiving their

R. N., only to be ruthlessly tossed aside with perhaps a grade of 40 or 50, and branded as unfit.

Is this reason, is it within the law, is it humanity? To my mind it is monstrous and absurd.

We have had repeated examples of these pathetic pictures, defeated applicants coming with tears in their eyes, who, with a full measure of justification, feel that they have not had a square deal. These disappointed girls feel that they have been discriminated against. One such came to me in sackcloth, ashes and lachrymose,—on her face was written despair and bitter disappointment, declaring that nothing remained for her but to jump from the bridge. Let me frankly ask you teachers and registered nurses, whose fault is this, on whose shoulders should this responsibility rest? Is it the crestfallen pupil nurse? Unequivocally, no. It is definitely the directress of the school. It is her solemn duty to stop these pupils at the threshold of their ambition.

Then again the fault lies with those who are supposed to teach and lecture, and who, with a clear conscience violate their obligations. These observations, I regret to say, come from accredited schools.

I would have this honored association appoint a board of censors, if you desire, to aid the state board of examiners in the relief of these embarrassing problems, censors whose function might be to reprimand such schools, or recommend that they be suspended from the accredited list, or suspended from your organization. Willingly would your board have this responsibility divided.

Witness for one moment a few answers which have come under my personal observation from nurses presenting themselves for the R. N. degree in the northern section of our state, and from well known and accredited hospitals, then tell me whether or not the examining board is not justified in sending these nurses back to try it again.

Balancing these pseudo-literary atrocities the board has had the greatest satisfaction and pleasure of reading and grading some masterpieces. The question often comes up: Should any nurse ever receive 100 per cent at these examinations?

The board has decided it best to select 20 questions representing each branch of the nursing art, or from those branches from which they have received didactic lectures, along with a practical test, and our contention is that if a question is perfectly answered she shall be marked 5, and if 20 questions are correctly answered that nurse will be marked 100.

We have also adopted, for the certificates, a special mark and ribbon for unusual excellence, as follows: Any nurse making a grade from 90 to 95 per cent to receive the mark *"cum laude"*; from 95 to 98 per cent, *"magna cum laude"*, and above 98 per cent, *"summa cum laude."*

I am happy to tell this association that the general trend is upward; that in the past five years there has been a very marked improvement,—better schools ,a more serious and a far better understanding of the responsibility in the teaching problem. A more critical analysis has been made of the whole educational scheme. Many training schools have employed full time teachers. Much of this has arisen out of the standardization of the hospitals through the helpful influence of the score system, as inaugurated by the American College of Surgeons, and the American Medical Association.

I want to pay the highest tribute to the present efficient secretary of our board, Mrs. Andrew Wilson. A complete report of her recent survey is being prepared and each school will receive a copy.

I also want to acknowledge with gratitude the counsel and help of Dr. Harriet B. Jones and Mrs. McIntosh Noel, both of these members of our board have ever manifested unflagging interest and I wish to register my personal thanks to Governor Gore for their re-appointment.

A brief synopsis of the former secretary of the board of examiners, Miss Clark, may be interesting. This was based on the annual report made in obedience to the law, and is dated March, 1923. Thirty-four schools answered the call, and nine failed to do so. Three training schools were discontinued because the hospitals in which they were conducted closed their doors. Two hospitals asked to be admitted to the accredited list,

although they hardly measured up to the minimum standards. These two hospitals as well as several others, continue to send up their graduates up for their R. N., some of whom have never entered a high school. The number of graduates employed in executive positions 98, the number of pupil nurses in training 505. The full time instructors employed at that time were only five| It is hardly fair to publish to the outside world this very low figure, as in most of our hospitals didactic lectures and instruction are given by the medical staff without any pecuniary reward or any public record of their work, hence they are not here classified in the employed list. The bed capacity was 2,141, kept no permanent record of their graduates and this number, I am sure, is almost doubled in this year's count. Several institutions kept no permanent record of their graduates. This is manifestly unfair to the nurses who have finished their course and are seeking positions along special lines in other hospitals, or in social service work. The number of nurses registered in our state in 1923 was 1,443, but this number is materially increased this year.

We would call the attention of every training school directress to study carefully the old law, as well as the revised Code, that they may make a comparison and see wherein they differ, and immediately bring their school up to modern, present day standards, based on the National League of Nursing Education.

The amended and reenacted Barnes Code, involving fundamental changes in the law relating to the examination and registration of the nurses of West Virginia, which has recently become a law, was a wise and timely measure. Those few leaders who were most active in the fight and responsible for putting it across, in the face of much opposition, are deserving of the thanks and appreciation of this association. From time to time additions or possibly correctons may be added to this Code, but as it stands today in its basic principle it is sound, and is unquestionably one of the most righteous documentary papers for the welfare of the nurse that has been issued by ANY state.

While the time is not now opportune for suggestions to be made to the Chief Executive of our state, in the selection of the nurses or physicians who are to fill the vacancies, as they occur, on the state board, I trust that some future day it may be given this society of nurses, together with the state medical association, to submit a list of suggestions from which the Governor may make his selection, and placing for nomination women of long experience in teaching and directing, or those who have served in an executive capacity, as well as physicians who are willing to give of their time to the vital problem of the educational uplift of the modern nurse.

I want to say just one word on the nurse as a citizen. The words of Kingsley ring as true today as when they were written years ago: "Thank God every morning when you get up that you have something to do that day which must be done whether you like it or not. Being forced to work and forced to do your best will breed in you a hundred virtues which the idle never knew."

There are many fields for your endeavors outside of the drudgery of nursing. Churchill has said: "Few men, or women either, dare set their will against a multitude (especially when directed along the lines of public welware), and particularly when there are no apparent fruits to be won. Columbus persisted and found a new world."

Mrs. Simons, in addressing the nurses of a California hospital, in urging them to make patience their motto, quoted from the great Dickens, "My imagination would never have served me as it has but for the habit of commonplace, humble, patient, daily, toiling durdging attention." There are a hundred activities outside of, yet related to your professional work that should at least enlist your attention; I will mention but a few vital municipal problems: Proper housing conditions for the poor, a living wage for all workers, decent places of amusement, purification of the motion pictures, and the effect of these pictures on the mental and moral attitude and welfare of children, or the psychology of the pre-school child; supervised playgrounds and dance halls. All these are necessary for the safeguarding and the protection of the coming generation, and are problems bearing directly on the prevention of vice, disease and crime.

The welfare of children should be one of chief concern to you. It is part of your duty to find out why one out of four babies dies before it is a year old; how many children from four to fourteen go to work, and to work for more than eight hours a day; how many children never have enough to eat, and how many young girls are unwilling victims of a system that is without parallel, as Mrs. Simons has emphasized it, in its insidious and hideous methods of betrayal, because she has not had at the proper time the protecting big sister arm, or the word of warning from some woman or nurse who knows. Why should you assume the attitude of "holier than thou," or "Am I my brother's keeper?" when these burning problems are daily in your path. Almighty God has placed these opportunities before you gifted and privileged women, individually and as an association, and He expects you to do your part, to carry on with sympathy, unselfishness, with full devotion to definite principles, which have been tried and proved, acts which are witnesses to a living and perfect faith, as Sir Berkley Moynihan has so aptly observed.

While sojourning in Europe this past summer it was my sad and sacred privilege to visit the very spot in the beautiful City of Brussels, Belgium, where Edith Cavell was ruthlessly slain at dawn on October 15th, 1915. I placed a bunch of white roses, symbolic of purity and innocence, on the slab where she faced the German firing squad. This token was made on behalf of this West Virginia Nurses Association, which I now have the honor to address. I wonder how many of you remember the last words of this doomed sister nurse, written in her cell at St. Giles prison the eve before her execution? This is but an extract from a beautiful letter addressed to her pupil nurses: "Devotion to duty will bring you true happiness, and the thought that you have done your duty earnestly and cheerfully before God and your own conscience, will be your greatest support in the trying moments of life and in the face of death."

The first hospital was founded by the words of His mouth, somewhere on the road leading from Jerusalem to Jerico, and the first patient, broken and bruised by the roadside, was treated and nursed by the Good Samaritan. The first nurse was graduated at Roxbury, in 1873, a little over a half century ago. When one stops to reflect over the tremendous leaps, bounds and transformations in your art leading to a highly differentiated profession, (as Dr. Matas has fittingly put it), and the monumental service to humanity which has been rendered, along with prodigious achievement, one cannot but thank Almighty God, who gave Florence Nightingale her first inspiration, and be ever grateful to the army of good and patient women who have followed her lead, women who glorify their work and who translated duty into privilege, and who have educated and trained you and others for a thousand accomplishments.

I should like to paraphrase the recent remarks of Dr. J. Basil Hall, president of the British Medical Association, and apply them to the nurse, and how true they are: The art of painting and the art of nursing are very similar. There are artists who produce pictures by a few bold strokes of the brush or pencil. Their work captures the imagination and it lives. There is also the artist who produces a picture full of minuet detail. It is very beautiful, but before long it begins to pall, and sooner or later it ceases to attract. So is it with the art of nursing. The woman who can grasp essentials, and who is gifted with "vision", because she has viewed Nature from a broad standpoint, lives in the memory of future generations, her work remains because she has studied the great essentials of life. The other obtains a passing notoriety as a good nurse, but her work is done in a perfunctory way. What she does attracts the eye for the moment, but it lacks that sterling quality which marks real genius.

Genius is not a heaven-sent gift. It is the infinite capacity for work,—a capacity for using our brains in the study of everything which enters into our existence in the service of humanity.

Increase your driving power. How beautifully Dr. Harry Emerson Fosdick has put it: When Magellan circumnavigated the earth he was hunting for the truth about the globe. When Galileo swept the heavens with

his telescope he was hunting for a larger vision of the universe. When Pasteur, in spite of his paralysis, sought for the secret of disease, he was hunting a remedy for human ills. When St. Augustine prayed, "I will seek Thee, that my soul may live," and he was hunting for spiritual resources without which life is not worth living. To what fine meanings and noble aims can this primitive hunting instinct be expanded.

My message to you all is not so much "be educated" but to "stay educated." The best interests of humanity and society demand the highest type of woman; one who acts as Isabel Stewart puts it: "As a scientifically trained assistant TO, not a servant OF, the physician, one who is fitted to lead in certain branches of social work," and may we add, one not only with aims but with accomplishments.

There are many more problems awaiting your attention, problems which deserve the most patient and conscientious consideration, (many of them emphasized by Dr. Matas in his address to the national association): Uniform standards for matriculation and graduation; length of practical hours during the period of training; the proper nursing of the great middle class and the poor; some insurance society to protect nurses in their days of misfortune and infirmity; ways and means for the direction and careful survey of the nursing specialties; the financial and social compensation for those who are ever making great sacrifices in obtaining higher collegiate and academic training; the question of a full-time educational secretary. These and a hundred kindred subjects should furnish material for future papers to be read before this association. But time will not permit a discussion now, nor are these subjects for a presentation from one representing the board of examiners.

In closing I want again to have you know that the attitude of the medical man, or the board of examiners, is to cooperate with you in your ever laudable undertakings, and may God speed you on the way.

TO THE TRAINED NURSE

"Come, pledge me to her noble worth,
  To her the brimming goblet pour,
At duty's call she leaves her home
  For Verdun's field or Flanders' shore.

Her home? 'Tis by the sufferer's side;
  O'er him she bends by night, by day;
Then wipes the death damp from his brow
  As angels bear the soul away.

Nor yet doth cease her ministry,
  For mother, sister, sweetheart, wife,
Full oft are told in tenderest words
  The story of the closing life.

So pledge me to the womanhood,
  The faithful work—the mission high,
Of her whose life it is to tend,
  The couch of those who moan and die."

NEW CONCEPTIONS OF TUBERCULAR HEREDITY

Writing to the Academy of Medicine of Paris, France, at a meeting January 19, 1926, Dr. Henri Durand presented a report on the "Presence of a Filtrable Virus of Tuberculosis in Human Tubercular Matter." Dr. Durand declares that without previous knowledge of work of predecessors, he has obtained a filtrable, non-culturable virus of tuberculosis from the pus of cold abscesses, ganglia of the mediastinal cavities, pleuretic liquids—both clear and purulent, with which virus he has obtained typical or atypical tubercular infections of the animals of the experiments.

He recalls that these same ideas have been put forward by Fontes and by Valtis for both pus and sputa.

This permits the affirmation that tuberculosis is not limited alone to the infection by the well known bacilli; but is also caused by such filtrable virus which seems to be obtainable from every sort of tubercular matter.

—W. S. M.

Our President & JAMES R. BLOSS

When the House of Delegates elected James R. Bloss, known as plain "Jim" Bloss to thousands of medical men over the country, to the high office of president of the West Virginia State Medical Association by unanimous vote at the fifty-eighth annual meeting in Bluefield, a precedent was established. He is the youngest president the association has ever had and he well deserves the honor. In his modest unassuming manner he has been a constant and untiring worker for the association and the advancement of medical science and, needless to say, he has plans and ideas for the furtherance of association activities which will interest every member of the profession. Non-affiliated members are urged to make his acquaintance at the annual meeting in Morgantown.

JAMES R. BLOSS, *President*
The West Virginia State Medical Association—1926

James Ramsdell Bloss was born in Ceredo, September 5, 1881, and has resided in Huntington virtually all of his life. He attended the public schools and graduated from the Huntington High School in May, 1900. He entered the medical department of the University of Virginia in September, 1901, attended the four year course, and graduated in June, 1905. After passing the state boards of Virginia and West Virginia, he was an interne in the Chesapeake & Ohio hospital for six months, then Huntingston State Hospital as assistant superintendent to Dr. L. V. Guthrie. Dr. Bloss remained in this service until May 1, 1913, when a partnership was formed with his uncle, the late Dr. C. R. Enslow, which continued until 1920 when Dr. Enslow retired. Dr. Bloss has been in private practice ever since.

He became a member of the staff of the Chesapeake & Ohio Hospital in 1913 and for the last four years has had charge of the department of obstetrics to which he has given special attention. He has been in charge of the medical work for the Salvation Army Hospital since its organization several years ago.

Dr. Bloss is a member of the Cabell County Medical Society, the West Virginia State Medical association, the American Medical association, the Southern Medical association, the Association of Southern Railway Surgeons, the Chesapeake & Ohio Railway Surgeons association, and the American Psychopathic association. He is sponsor for West Virginia of the Physicians' Home, Inc., and a member of the advisory committee for West Virginia of the Gorgas Memorial association. For ten years prior to January 1, 1926, he was editor of the West Virginia Medical Journal. At the annual convention in Webster Springs in 1912, he was elected first vice president of the state association. He was secretary of the Cabell County society for ten years and its president in 1923. He has been one of the delegates to the American Medical association for the last eight years.

The editors know that when "Jim's" term as president expires, he can be depended upon for any service that is needed.

THE WEST VIRGINIA MEDICAL JOURNAL

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS

J. HOWARD ANDERSON, Marytown — WALTER E. VEST, Huntington — CHARLES W. WADDELL, Fairmont — HARRY M. HALL, Wheeling

THE JOURNAL issued on the first of each month. Entered as second-class matter, January 1, 1926. Acceptants for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Authorized July 24, 1919.

Subscription to Members ..... $2.00 Per Year
Subscription to Non-Members ..... $3.50 Per Year
Single Copies ..... 35 Cents

OFFICERS

President:
J. R. BLOSS ..... Huntington

First Vice-President:
R. O. ROGERS ..... Bluefield

Second Vice-President:
H. C. SKAGGS ..... Montgomery

Third Vice-President:
D. A. MACGREGOR ..... Wheeling

Treasurer:
HUGH G. NICHOLSON ..... Charleston

Executive Secretary:
MR. STERRETT O. NEALE ..... Charleston

Delegate to A. M. A., 1926:
J. R. BLOSS ..... Huntington
C. R. OGDEN, *Alternate* ..... Clarksburg

Delegate to A. M. A., 1926-27:
H. P. LINSZ ..... Wheeling
R. A. ASHWORTH, *Alternate* ..... Moundsville

COUNCILORS

First District:
H. P. LINSZ, (1-year term) ..... Wheeling
C. G. MORGAN, (2-year term) ..... Moundsville

Second District:
C. H. MAXWELL, (1-year term) ..... Morgantown
C. H. HALL, (2-year term) ..... Elkins

Third District:
JOHN FOLK, (1-year term) ..... Bridgeport
C. R. OGDEN, (2-year term) ..... Clarksburg

Fourth District:
J. E. RADER, (1-year term) ..... Huntington
W. E. VEST, (2-year term) ..... Huntington

Fifth District:
J. H. ANDERSON, (1-year term) ..... Marytown
H. G. STEELE, (2-year term) ..... Bluefield

Sixth District:
R. H. DUNN, (1-year term) ..... South Charleston
C. A. RAY, (2-year term) ..... Charleston

¶ All original articles for THE JOURNAL must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

¶ Our readers are requested to send marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

¶ It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

¶ Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

¶ Advertising forms will go to press not later than the tenth of each month. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

¶ Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, 211 Smallridge Building, Charleston, W. Va.

STANDING COMMITTEES

Medical Defense Committee

H. P. Linsz, Wheeling; C. R. Ogden, Clarksburg; C. G. Morgan, Moundsville.

Committee on Scientific Work

G. H. Barksdale, Charleston; O. D. Barker, Parkersburg; D. A. MacGregor, Wheeling, Scientific Secretary.

Public Policy and Legislative Committee

C. A. Ray, Charleston; G. A. MacQueen, Charleston; R. H. Walker, Charleston; James McClung, Richwood; J. R. Bloss, Huntington; D. A. MacGregor, Wheeling.

Committee on Hospitals

Robert J. Reed, Wheeling; B. H. Swint, Charleston; R. J. Wilkinson, Huntington.

Committee on Professional Relations

J. R. Shultz, Charleston, chairman, (3-year term); H. G. Nicholson, Charleston, (1-year term); H. R. Johnson, Fairmont, (2-year term); A. G. Rutherford, Welch, (4-year term); W. R. Goff, Parkersburg, (5-year term).

Surgical Section

E. Bennette Henson, Charleston, chairman; W. R. Goff, Parkersburg, secretary.

Eye, Ear, Nose and Throat Section

T. W. Moore, Huntington, chairman; R. A. Tomassene, Wheeling, secretary.

Woman's Auxiliary Officers

President, Mrs. A. G. Rutherford, Welch; *First Vice President*, Mrs. W. H. St. Clair, Bluefield; *Second Vice President*, Mrs. J. P. Lilly, Morgantown; *Secretary*, Mrs. C. M. Scott, Bluefield; *Treasurer*, Mrs. C. A. Ray, Charleston.

EDITORIAL

THE RELATION ON THE PRESIDENT TO THE PHYSICIANS OF WEST VIRGINIA

During the year of his incumbency the President of the State Association does, in a sense, lead the profession of the State. Yet because he is the titular head of the organization it does not follow that he is a man apart from the individual member. The present incumbent of this office feels it an absolute impossibility to get the atmosphere of being president. There is the feeling of personal and intimate friendship for the individual members only.

For twenty years we have been meeting the physicians at the annual meetings, until we have come to know them as brothers. One of the fine things about the annual gathering has been to have the happy pleasure of seeing our friends again, and calling them by name.

If it were only possible for me to inoculate in some way each of the fellow physicians with this germ of friendliness and gladness when we even think of physicians throughout the State, a great deal would have been accomplished, to make our profession a friendly one.

If all of the physicians in the state could only be induced to attend regularly their County Society, and the annual meetings of the State Association, we would have traveled a great distance toward bringing about a better spirit of co-operation in our daily work. This would cure many of the ills of the medical profession. It would destroy envy and jealousy, the two things which do more to keep strife living in our midst than any others.

It has been my hope that during this year we would make a great advance along this line of professional friendliness, and that we could awaken a spirit among the members of the component societies which would determine them to regularly attend their meetings during the year.

So it seems that the relation of the President to the Physicians of West Virginia is only one of cordial individual friendship, with all that this implies.

—JAS. R. BLOSS.

———o———

NON-AFFILIATED PHYSICIANS

Have you ever considered just what it means to your professional life by not being affiliated with your local society and State Medical Association? Of the 1700 regularly registered physicians in West Virginia there are about 500 who are not members of any medical society or association. We are loathe to believe that all of these 500 are satisfied with their position in life and standing in the profession, or content to continue out of harmony with their fellows in this progressive era of medical science, especially since this fellowship is composed of the best men of the profession in West Virginia. You are from choice a stranger to these men, and we want to introduce you.

We will not attempt to enumerate the benefits which accrue by being in full affiliation with the profession, but would remind you of some handicaps and disadvantages to which you are subjected. You are deprived of membership in either of the two great medical associations of the United States—The Southern Medical Association and the American Medical Association. You are not eligible for any official position in the administration of the public health laws, and you could not obtain reciprocity in many states should you desire to change your location. Virtually every insurance company wanting an examiner gives preference to the doctor who is a member in good standing of his medical society. Should you, unfortunately, become the defendant in a damage suit for malpractice, you do not have the wholehearted, moral support of all members of the profession. You do not have that feeling of assurance that the brother doctor whom you meet on the square will leave you on the level.

If there is any one thing we are "cranky" about, it is ethics among doctors. We are always willing to accept advice from our fellows and just as willing, in our humble way, to help the other fellow when we can, and we want to help you to help yourself. If through the activities of the county society you become a more proficient doctor, it stands to reason that you will be a better citizen. Regular attendance at church always enhances the social standing of any man, and your professional life should be secondary only to your religious life. We want you to read and meditate over every article in this issue of *The West Virginia Medical Journal*, compare it with other journals, note the many suggestions in it that will probably help you in some case you have at this time, and see if you can't conclude that twelve copies, as good or better than this one, are worth ten dollars plus dues in your local society, to say nothing of the many other advantages accruing upon membership in the state association.

Instead of your dues being a burden, it will be an investment which will pay many times the dividends you will get from books for which you expend many times that amount.

You will receive in a few days a copy of the program for the state meeting to be held at Morgantown, May 25, 26, 27. If you have never attended one of these meetings, begin now to make your plans to be there, and we will guarantee your future affiliation.

—C. A. R.

———o———

KEEP APACE WITH TIMES!

"O wad some power the giftie gie us,
To see oursel's as ithers see us,
It wad frae monie a blunder free us,
And foolish notion."

These classic words of "Bobby" Burns belong to the Ages, but may they not be pregnant with a vital significance to every practicing physician or surgeon of today?

Mr. Busy-Man! Have you ever stopped in your daily grind of hard selfsacrificing work to ask yourself the serious, all important question: How do we, the practicing physicians and surgeons of today, stand in the eyes of the public?

Aye! Let us be brutally frank with ourselves. Do we occupy the same dignified, honored, and influential position in our communities, which did our forefathers? Are we wearing with credit to ourselves the mantle which they let fall upon our eager shoulders? If so—why the recent birth and rapid growth of so many "cults" and "isms" dealing with the sacred Art of Healing?

Barnum showed wonderful knowledge of human mob psychology when he intimated —yes said boldly, "The American public likes to be fooled." But down in our patriotic hearts do we not feel as more fundamentally true, the immortal utterance, attributed to Lincoln: "You may fool some of the people all the time; and all of the people some of the time; but you can't fool all of the people all of the time."

Why then, do the public rally around and support, in Legislative Halls and elsewhere, the standards of charlatans? May it be that we individually and collectively are failing to prove worthy of our heritage and to keep pace with the progress of modern times? It is not, therefore, time for us to turn a critical eye upon ourselves and make a scientific and sincere diagnosis of our professional maladies and energetically turn our ability towards promoting a cure?

During the past three decades the world in which we live has gone forward in leaps and bounds—from the one-horse shay to the high-powered automobile; from letter-post to telegraph, aero-plane mail, and wireless; from the weekly paper with clippings and extracts to the voluminous daily with 24 hour telegraphic news. Knowledge of all descriptions, including that pertaining to health and medicine is disseminated by the news columns, by cinema, and by wireless; and is being eagerly assimilated by the public.

It is true that medicine and surgery have, in the period, made wonderful strides of progress. But are we collectively and as individuals keeping pace?

The plumber, the merchant, the salesman, the manufacturer, the coal operator, the farmer, the banker, etc., in their eagerness

to keep abreast of the wheels of progress meet and organize in associations, for they are quick to realize that they must assemble together to discuss and learn how to solve the problems which confront them in their work.

Do we, who deal with the greatest problems—Life, Health and Death—need the less to gather together to discuss, disseminate and assimilate amongst ourselves the marvelous advances in our wonderful field of endeavor?

Do you realize that the County Medical Society is the logical clearing house in which you not only may but should thresh out your problems, of a business and ethical nature; but that it may be made a veritable postgraduate center for the assimilation and dissemination of the revolutionary advances being made in the healing art.

Stop! Are you affiliated with your County Medical Society? If not—why not? If so! Are you enthusiastically striving to make it the fountain source of real, honest, uptodate endeavor along medical and surgical lines? Let us frankly put these questions to ourselves in soberness and earnestness—think them through—and being big enough in soul to set aside personal jealousies, let us work shoulder to shoulder for the aggrandizement of the world's greatest profession.

By so doing, may we not, individually increase in wisdom and ability, and collectively force the public and our respective communities to restore our noble profession to that homage of which it is so worthy.

"O wad some power the giftie gie us."

—J. H. A.

———o———

DO YOU READ OR WRITE?

It would hardly seem that anything written upon the advantages to be derived from a constant, systematic perusual of current medical literature would be of value, as most physicians realize that their professional status largely depends in direct ratio to the number of hours spent in this procedure.

However, deplorable as it may be there are many, who treat the sick, who seem to think that their education has been completed when they receive their professional degree and pass the state board. Experience proves that graduation is not a completion, but if accepted wisely is really only a beginning. Any wide-awake practioner with years behind him will frankly admit that most of his store-house of knowledge was acquired after his practice began.

Many men in our calling do not have the financial resources to leave their practice and mingle actively in post graduate work often, but each month there can be delivered at their door by the postman a mighty good post graduate course. Very few men have a clinic large enough to draw definite conclusions on any given therapeutic procedure. As example, how many of us from our own experience know the value of toxin and antitoxin as a prophylatic measure. But who doubts its efficiency after the brilliant tabulated results in our magazines. Who, except those associated in clinical research work, have any original ideas on non-surgical biliary drainage? However, any physician in this state should know as much concerning this valuable adjuvant, as Dr. Julius Friedeniald himself, not through knowledge derived by his own effort but through faith in accepted disseminated medical facts.

Any general practitioner or any man in any speciality by a careful selection of his medical magazines can be kept absolutely fully informed upon any new procedure in diagnosis, or therapeutics in his respective field. There are in this state those who can mingle with any group of eminent physicians and discuss intelligently medicine, for he who reads diligently, (although he may reside in a rural section) may be as wise as those more fortunate who reside in some medical center.

Our work is mostly thinking rather than technical manipulations. Hence our real instruments are our books and magazines. Books are very useful, but in any profession making the scientific advancement that ours has, the books that give the current accepted thought today, are obsolete shortly. The current magazine gives all a chance to rearrange his ideas and keep them modern by monthly adjustments.

Some sage has wisely said, "There are two

kinds of knowledge, one that is carried along with you and one that you know where to get." We can not all have the same amount of the first, but any physician practicing in any country town or coal camp can have just as much of the second as Dr. Charlie Mayo or Dr. John B. Deaver. Will not your money buy the same books and magazines as theirs will? The difference is that these distinguished gentlemen keep step with progress by carefully studying each day their periodicals, looking for anything that will help them in rendering more efficient service. If these men feel the need each day of careful study, how about your need?

Those who do not avail themselves of this tremendous source of vital information are not aware of the help this will be to them in their daily work. Give it a trial. Some evening carefully read some article in one of your journals, after reading it write down anything new you have learned, or anything brought to your attention in a new way. One such evening will make anyone an enthusiastic student.

The march of medicine is onward and upward and any who wish to keep pace must resort to daily post graduate work through careful search of his medical magazines.

—J. R. S.

ARE YOU EQUIPPED?

There are many things in medicine to engage the modern physician. They are so many, so complex, so exacting, so obscure, again so insistent, that there come periods of tiredness, of baffled skill, of introspective inquiry into the minds of many medical men that well-nigh make them hold up their hands and say, "What's the use!"

It is then that the subtle temptation to grow loose and slovenly and slack in the treatment of the sick enters into men's souls. For, one reason fatuously, the Creator of the Universe could hardly expect ordinary humans to know so much and to acquire such a multitude of methods. The specter of that labyrinth of modern practice looms up—the laboratory. Then the internal secretions. Filterable virus and what not! The weariness grows and the inertia begets the idea of unloading the baffling cases on some distant metropolitan specialist or clinic. Embarrassment growing deeper and more serious, the weak decide to adopt some cult or irregular practice that shall at least offer one idea as a cure for all us mortals suffer.

Think what you will, reason as you can—the truth is we were put here to get the facts, and getting them is actually about all the real fun any of us will ever extract from our pilgrimage. Pasteur, Banton, Harvey and the others are the men who really enjoyed life in the "brimming cup" sense. And it is generally conceded, too, that these men by reading, contact and investigation found that the curing of the sick was not nearly as complicated after one had the real facts. It is mystery born of ignorance that is complicated.

Medicine like everything else is a matter of clear common reason, a sense of proportion and ability to visualize. All the violent fads and mistakes that have cluttered the way arose from a disregard of these.

One will not wait sometimes! Perhaps the every day practitioner cannot make a patient wait like a specialist can. Nevertheless, we are all too breathless in our quest for a diagnosis to fit the seeming symptoms. The condition present most likely cannot be obtained in any such quick and happy fashion. No one either here or there could possibly so obtain it. The more ignorant we are, the more apt we are to hasten, to overlook, to disregard. And it is just to equip the average practitioner for such problems that Medical Associations exist and journals flourish. They cannot be said to greatly aid the expert nor the highly trained man. Possibly you may say they enable some men to shrewdly advertise what they are doing! Hardly, as casual investigation will prove. On the contrary the great men tell you how they do and what they do and in this age you should be able, in most cases, to do it yourself instead of going to them. So it is scarcely selfish. They give. Doubtless it is little they receive. Now to the good attendant at any recent medical meeting who has

spent his time reading his Journal as well, there has been given a tremendous wealth of knowledge on "Focal Areas." And to this writer it would be difficult to see how any one could be versed (save through a Postgraduate course) in this important subject if he had not heard this bounty of "Focal" knowledge. And yet if one had not the knowledge, it is easy to see how much more complex the ordinary practice of medicine would necessarily be. Recently we had the opportunity of seeing the answers a class of graduate nurses gave on Focal Infections, and it was rather edifying to see the knowledge they had picked up about the Hospital on the subject. So we medical men must know our responsibilities. The danger is in overlooking them, of believing so small a point of infection as a tooth could give a man an ailment that would make him bedfast. That he could have tonsils which appeared good on casual inspection that were really giving him a non-compensating heart or a damaged kidney. That his appendix with almost no tenderness was giving him his nausea and indigestion. Or that a sinus was making him unfit for business, because of a raging headache betimes. One untutored in the latest wisdom would look in vain for more pretentious causes. What hideous mistakes are made in this quest of some such, let us say, "magnificent pathology." And it is the man who feels he has mastered most of the science of medicine when he left medical college who is most apt to make them.

We nearly all know we have just begun when we leave a medical college. What would a man do today who graduated twenty years ago with brilliant honors and yet has not kept up by contact with his fellow practitioners and the literature when it comes to diagnosing the many, many conditions due to focal areas. He would be lost. In a paper of this sort, it is idle to go into the pathology, comparatively simple as it is, of foci of infection. But every man who aims to practice medicine in anything like a suitable manner must be on the alert for these areas. He cannot afford to overlook any. And it cannot be done hastily. This writer had a case of temporary insanity cleared at a sanitarium because he overlooked a focus in a brand new piece of bridge work. Not that that was in his mind the sole cause, but it was a big contributing factor. And his faith in all dental work caused him some humiliation.

The writer of this article is not an over enthusiast on foci of infection. He is in the small minority who think it has been carried too far. Too much is laid to their door and this makes for slovenly diagnosing, since it is easy to lay everything that comes along to a tooth or tonsil. It is, therefore, of great importance that by contact with our brother physicians and our Journal that we keep constantly in condition of mind and perception so that we never by chance overlook an obscure focus and on the other hand, avoid falling into the all-too easy habit of calling everything that comes our way as depending on their existence.

Only by being circumspect can we keep in the middle of the road. Only by reading the latest papers in our Journal, from every conceivable source, can we learn the lesson from thousands of experiences. For medical literature is becoming more candid every day. And if that be so, then finally can we learn just how much to expect from an obscure focal area. And what is just as important—how far that expectation can go before it becomes fantastic and illogical.

—H. M. H.

---o---

KEEPING STEP

If you were a soldier in the ranks and failed to keep step with your comrade, you would be reprimanded severely by your commanding officer.

If you failed to keep step with your partner on the ball-room floor you would soon be shunned or ignored by good dancers.

A church choir would be a nuisance with three or four voices out of time.

Are you, as a doctor, whether you graduated forty years or two years ago, keeping step or time with the progress of the science of medicine?

Thirty-five or forty years ago, when some of us graduated we expected and were dis-

appointed if a wound of tissues from any cause did not have "laudable pus." If we could locate the heart valves and distinguish the different murmurs, we knew all about heart diseases. Fehling's test for sugar in urine and nitric acid for albumen was about the extent of laboratory training. We knew what a red or white blood cell looked like, but their increase or decrease meant nothing. Diagnosis was made by exclusion alone, and our treatment was calomel, quinine, expectant hope, and trust in the Lord.

If you have been content to remain in the dark alley where you were when Koch and Lister began to let in the sunlight of cause and prevention of disease, we are frank to say you are not much of a doctor as the title implies this day and time.

If you were a railroader, mechanic, or salesman, you would belong to the brotherhood, you would be required to keep a first-class watch and have it tested every day, keep posted on the quality of materials that were used in your trade, or attend meetings of your business house every Saturday afternoon, all for the purpose of being sure you were on time, safe and up with business changes.

As a physician, do not lose sight of the fact that the public is being educated along the lines of disease prevention and health preservation, and is able to "size up" a doctor who is up-to-date, whether he be young or old.

For your progress and edification, the profession has to offer your county, state and national associations with their records, reports and journals at a cost which is insignificant compared with the advantage and information to be obtained. An expense not to exceed twenty-dollars will bring you regularly *the West Virginia Medical Journal*, Journal of the A. M. A. or S. M. A. which if read and digested will keep you up-to-date. Like most of us you may be busy and have important engagements, but bear in mind that a doctor never lost a patient or prestige by attending a medical meeting or post-graduate course.

Meet us in Morgantown in May whether you are a member or not and be convinced that keeping step will be worth your while.

—C. A. R.

REPORTS FROM COMPONENT SOCIETIES

Kanawha Medical Society

(Kanawha-Clay-Putnam-Boone)

At the regular meeting held March 16th in the Kanawha Hotel scientific and business program was as follows:

Dr. R. K. Buford, presiding, opened the meeting.

Dr. R. H. Walker of Charleston read a very well prepared paper on "Surgery of the Hand," well illustrated with diagrams and lantern slides. He emphasized the importance of injuries to this member from an economic standpoint and gave a brief sketch of treatment of infections.

Dr. W. T. Henshaw, State Commissioner of Health, gave an informal address on illegal practioners in the State and especially in this county. He stated that there were very few of these men in the state and that the central and southern section seemed to attract them more than the northern section, due chiefly to the contrast in tolerance of the profession in these areas. He further stated that for any successful action to be had against these violators of the law, there must be strong moral support given by the local practioners in the county where they flourished. The talk was finished by a request that the society endorse the action undertaken against certain men in Charleston. After considerable discussion favorable to this suggestion, a motion was made and passed that a committee of three be appointed to secure information against certain illegal men in Charleston for use by the prosecut-

ing attorney. Upon further motion it was then decided to extend the scope and purpose of this committee to cover all illegal practioners in the area covered by this society.

Dr. E. A. Hardy of the City Dept. of Food and Sanitation gave an interesting lantern demonstration of what constitutes a good and bad dairy farm and then spoke of the need of a Medical Milk Commission. There is no such Commission in the State and he assured us that it would greatly improve conditions to have the medical profession actively in touch with the situation as a part of the National Medical Milk Commission.

The society agreed to form such a commission.

Dr. S. D. Taylor of Ward, W. Va., and Dr. H. D. Law of Nitro were elected members of the society.

A regular meeting was held also on March 2. In spite of the extreme cold a fair attendance heard a most excellent scientific program.

Dr. William R. Laird of Montgomery presented: "The Value of Liver Function Tests in Physiological Survey of The Biliary Tract." This paper covered careful work being done at his clinic in Montgomery and was illustrated with graphic charts. The various liver function tests are being checked against each other in a large series of cases. Dr. Laird stressed the fact that these tests are of real value in preoperative prognosis and diagnosis and often prevent too hasty surgery where a rational preoperative preparation would improve risk.

Dr. Adrian Grigg of Beckley presented: "The Sympathetic Nervous System in Disease." He reviewed the sympathetic system told of the work being done upon it and put forward his belief that disorders of this system were back of certain vague disorders which apparently showed no etiology.

In the business session which followed this program Dr. W. A. McMillan presented a motion to endorse The New Health Society in London which is being sponsored by Sir Arbuthnot Lane and others. This was passed.

Dr. H. R. Glass of Charleston was voted into the society, and Dr. Ross Dodson of the Veterans Bureau and Dr. Moore who has recently returned from China were both changed from the status of Honary Members to Active Members.

—T. M. BARBER, Sec.

———o———

Ohio County

We have the Rev. Sproul in our midst. Following the plan of Billy Sunday, he has had a large frame building erected—called the "glory barn"—and with a rather quiet delivery and recalling his experience as a soldier in the late war, he is drawing crowds nightly. Incidentally, he cures the errors of the soul and mind and body. The lame walk, those with a cataract see, the harassed are comforted, the baffled are made confident again. We observe it afar off and are confused. Strictly speaking, we are inclined to think that regular Christian ministers rather than the medical profession are the ones to be condoled. Yet something is the matter with our methods—but the way out is hard to elaborate.

At St. Matthews Protestant Episcopal Church, the Rev. Sherman of Akron, Ohio disclaiming any kinship with the viewpoint of the Rev. Sproul or with Christian Science, nightly addresses audiences on the way to heal and cure by the Spirit rather than medical attention. He acknowledges the worth of us, even insists on a diagnosis by one of us before he goes ahead, but says we must be told our "inadequacies" and that doctors have thanked him for the lighted torch he has given them. He is a big, strong, good-natured, virile man. He says Christ was, too. Is willing to give him sex. That indicates he has his own courage. We asked him if he could cure actual pathology. His answer did not satisfy. We asked him if he would care to go on just as he is if no regular doctor was around the corner. His reply was he would not with his present understanding. Ah, friends, if they had us taken away from them — all at once in a body — WHAT WOULD THEY DO?

While all this discussion of curing or aiding the soul back to health is going on here

in Wheeling we hear that Doctor Mecklenburg, president of Linsly Institute, a boys preparatory school here, feels that members of the medical profession are not, by any means, flexible or elastic. If he is quoted correctly he wonders why the profession does not permit chiropractors and all other cults to work side by side with physicians in the hospitals. His mind has a vague suspicion that we are narrow and sort of against freedom and personal liberty. (You know all of the other things). We presume the learned man would welcome into his graduating class some students who had taken a few weeks correspondence course; and that if some bright lad would come along and say he had taken up some single course in one branch of learning and found that if it was pursued in a certain way it would give one the key to all knowledge so that it would not be necessary to take a long four-year course, Dr. Mecklenburug would believe it and let him do it.

The writer has a certain amount of impertinence in suggesting that some bright boy try this experiment because the writer does not know how to run a boys' school. Nevertheless, in this age when "everybody" knows so much about how to run the other fellow's business, the writer is tempted to try his luck.

NOTES

Doctors W. S. Fulton and Ivan Fawcett have been to Florida and are looking as if there is something to what they say about that wonderful place. Recreation, not real estate, beckoned these gentlemen.

Dr. M. B. Williams has been indisposed but is on the road to normal again.

Dr. Will Cracraft has returned from a short vacation to Bermuda.

Dr. O. M. Staats was ticketed for a long sojourn to South America. The doctor, however, had the bad fortune to be the innocent physician in an alleged "arsenic poisoning" case, and we have heard that the State may interfere in his plans by holding him as a material witness. There are, no doubt, too many things that are like red rags to this reporter's bullish fury, but one of the leading ones is the way the law handles doctors. It is true, many judges and attorneys do try their best to expedite our presence in their midst, but even at that it is a sorry business. One cannot blame so much a weary doctor failing to see an automobile accident or a suspicious case of death when you observe the inconvenience, out of proportion to what other callings endure, they are called upon to suffer.

Preston County

The year, 1925, was the third year of the existence of a full time Health Unit for Preston County. During this year, the physicians have shown by their action to be heartily in favor of organized, legalized health work on a full time basis. They have patronized the laboratory and shown more interest in scientific medicine by being more accurate in their diagnosis and careful in assigning causes of death. Their reporting of communicable diseases have been all that could be asked, except possibly tuberculosis and even in that it is believed that the Preston County physicians are reporting in every case they are called to see. They have rejuvenated the County Society and are now holding regularly meetings at regular appointed times and nearly every doctor in the County qualified for membership is a member. They have recognized a full time health officer as a progressive doctor in organized medicine by making him their secretary and representative to the State Medical Association.

A few of the outstanding accomplishments of the full time health unit, with the assistance of the physicians of the county, is herein given in order to show some of the benefits derived from a full time health unit.

The county has been freed of fakers practicing medicine. The general death rate reduced from 12.5 to 9.3. There being 90 deaths less in 1925 than there were in 1923. Stillbirths reduced from 42, 1924, to 27, 1925. Deaths from all communicable diseases reduced from 107 in 1923 to 40 in 1925. Thirty percent of the defects found in school children have been corrected. One-third of the residences are being supplied with either flush toilets where there is water, or sani-

tary privies. School children showing signs of goitre have been reduced 50%. At least 90% of the school children are now protected against smallpox and about one-fourth protected against typhoid and diphtheria and there has not occurred a case of diphtheria among the school children of this County during the present school year.

There is every evidence that the people in general are beginning to appreciate the efforts of a full time health unit, as they are beginning to understand its purpose and intentions and the physicians of this county are co-operating in the right way.

—JOHN THAMES, SEC.

———o———

Parkersburg Academy

A special meeting of the Academy of Medicine of Parkersburg was held at noon, March 4th, and an excellent luncheon served followed by an address by Dr. Thos. R. Boggs, Assistant Professor of Medicine at John Hopkins Hospital on "Biliary Disease." There were fifty-one present including several physicians from Marietta, Ohio.

Dr. Albert G. Hartenstein, formerly of Doniphan, Nebraska, has located here and has transferred his membership to our society.

Dr. Howard H. Veon, formerly of Richwood, has located here to engage in the specialty of eye, ear, nose and throat, and has been voted in as a member.

At a special meeting held March 24th, the new constitution and by-laws and incorporation papers were accepted and adopted and officially the Academy of Medicine of Parkersburg now takes the place of the Ohio Valley & Little Kanawha Medical Society. Our membership now stands 61 paid up members and two honorary members.

At this meeting we had as our guests, State President Bloss and Dr. W. E. Vest, of Huntington, the latter reading a very interesting paper on Pericarditis, which was enjoyed by all those present. Dr. Bloss gave an interesting talk on our state society and its future. Thirty-three members were present at the meeting including several from out of the city.

Logan County

The Logan County Medical Society met March 24th, at 8 p. m. in the Elks' Club rooms.

The speakers for the evening were Dr. W. H. Parker, who had a very interesting paper on Medical Ethics, which was discussed at length by members.

Dr. R. S. Van Metre, County Health Officer, gave a most interesting and instructive Venereal Clinic, having a large number of patients, which showed a great variety of the many manifestations of Syphilis.

Delegates to the State meeting at Morgantown in May were appointed as follows: Dr. S. B. Lawson and Dr. E. R. Logan, with Dr. E. B. Thompson and Dr. R. S. Van Metre as alternates.

The following committees were appointed:

Entertainment: Dr. R. R. Vaughan, Dr. W. T. MacClellan, Dr. C. A. Davis.

Inter-Relationship: Dr. R. S. Van Metre, Dr. W. S. Rowan, Dr. S. B. Lawson.

—C. A. DAVIS, SEC.

———o———

Marion County

Holding regular monthly meetings, the Marion County Medical Society enjoyed a most active year in 1925. The average attendance per meeting was approximately 25 and besides participating in their own sessions, Marion members joined with Harrison and Monongahlia counties in three tri-county sessions, the first at Clarksburg in May; the second at Fairmont in October and the third at Morgantown in November. Social features followed each of the tri-county sessions, making them most enjoyable affairs.

New members enrolled during 1925 include P. F. Prioleau, Ettor Pitassi, J. R. Tuckwiller, H. R. Yost, Joe Yost and Phoebia G. Moore. Marion had a 100 per cent membership in 1925, and showed a gain of six members over 1924.

The society has started 1926 with increased enthusiasm and it is anticipated that this will be the banner year in every respect.

—G. H. TRAUGH, SEC.

HOSPITAL NEWS

Wheeling Hospitals

The February staff meeting of the Ohio Valley General Hospital held Tuesday evening, March 9. A paper on, "Spastis Contraction of Gut" was read by H. M. Hall. In the talks on current autopsy material, an interesting case of gangrene lower limbs due to a plugging-up of abdominal sorts and both ileac arteries were presented. Thrombotic material was the cause. Another case coming under State Compensation as caused by an accident and due to concussion with no objective signs of fracture was also impressive.

Staff meeting of Wheeling Hospital was held Wednesday, March 10th. A paper on the "Feeding of the Sick" was presented by J. J. Osburn. The doctor has no great respect or admiration for "eggs" in the diet. The paper was very much discussed. Charles Wingerter read a paper on "Gastric Neuroses," which also created interesting remarks. John Gilmore, president of the staff is on the sick list. It is nothing serious, however.

———o———

Mountain State Hospital

In February the stockholders of the Mountain State Hospital held their annual meeting. It was attended by practically every man who owned stock in the institution. At this meeting the following officers were elected for the coming year:

Dr. R. H. Walker, president; Dr. T. J. Casto, vice-president; Dr. W. P. Black, treasurer; Dr. J. R. Shultz, secretary.

The following directors were also elected: Dr. R. Ross Hunter, George B. Kenney, Dr. E. R. Hatfield, Dr. M. I. Mendeloff, Dr. W. S. Shepherd, Dr. R. H. Walker, Dr. T. J. Casto, Dr. W. P. Black, Dr. J. R. Shultz.

Dr. J. Ross Hunter was elected by the directors as chairman of the board. Dr. R. A. Ireland was elected superintendent of the hospital for the coming year. Dr. M. V. Godbey was made an honorary member of the board of directors.

Dr. R. A. Ireland, who was superintendent for the past year, made an extensive report upon the clinic progress of the hospital. His report showed during the year of 1925 that nearly 3100 patients were admitted into this hospital. During this same period of time there were only 33 institutional deaths, although out of the 3100 patients admitted to the hospitals, nearly 900 were surgical cases. The mortality being about 1 percent of the admission, which compared very favorably with the mortality statistics of the largest hospitals of the country.

Dr. W. P. Black gave a report as treasurer in which he stated that during the year 1925 the hospital had made satisfactory financial progress.

Dr. J. Ross Hunter in his report as chairman of the board of directors, stressed the clinical progress of the hospital and a number of the staff entered in this discussion.

It was agreed that the primary unit of any hospital is the patient. It was adopted as a policy that in the future this institution would render even more scientific attention to the patients.

Also each physician would do his best to make all who entered this hospital feel that kindness as well as science was the policy of this clinic. Each man present determined to do his share to not only make Mountain State one of the largest, but also one of the best hospitals in West Virginia.

STATE AND GENERAL NEWS NOTES

NEW MEDICAL SOCIETY FORMED AT RICHWOOD

With a charter membership of more than fifteen, the new Central West Virginia Medical Society has been organized and is preparing for an active year. The minutes of the meeting held in Richwood, March 24, tell the story:

Pursuant to a call issued by officers of the Webster-Nicholas Medical Society, physicians of Braxton-Webster-Nicholas assembled in Richwood, March 24, in the Masonic Club. Those present were: Drs. James McClung, T. R. O'Rourke, C. Fred Fisher, J. Robt. McClung, W. E. Echols, all of Richwood; H. S. Brown, M. T. Morrison, E. S. Frame, of Sutton; William Bittinger of Richwood; John E. Hyer, Curtin; Lester Miller, Flatwoods; V. A. Davidian, Centralia; Max Gruber, Erbacon.

Dr. John E. Hyer, holdover president of the Webster-Nicholas Medical Society presided. He announced that the purpose of the meeting was to reorganize the society so as to include the physicians of Braxton County.

On motion of Dr. James McClung, seconded by Dr. M. T. Morrison, the reorganization was effected. Upon motion of Dr. Fred Fisher, seconded by Dr. Morrison, it was decided to officially designate the new organization as the Central West Virginia Medical Society.

Nominations for officers being in order, Dr. T. R. O'Rourke nominated C. Fred Fisher of Richwood as president. He was elected by unanimous vote. Upon motion of Dr. James McClung, seconded by Dr. Lester Miller, Dr. J. B. Dodril of Webster Springs and Dr. W. H. McCauley of Sutton, were unanimously elected vice-presidents.

Dr. Hyer thereupon relinquished the chair and it was assumed by President-Elect Fisher. Nominations for secretary-treasurer then being in order, the name of Dr. Homer S. Brown of Sutton, was presented by Dr. Morrison, and he was elected by unanimous vote.

Censors chosen were Dr. John E. Hyer, Curtin, three years; Dr. Hugh Dunn, Richwood, two years; Dr. W. E. Echols, Richwood, one year.

Upon motion of Dr. Morrison, dues for the County Society were fixed at two dollars ($2.00) per year. On motion of Dr. James McClung the standard Constitution and By-Laws for county societies of the American Medical Association was adopted.

Dr. Echols presented the name of Dr. Hugh Dunn before the society for nomination for delegate to the State convention. There being no other nominations, he was declared elected by unanimous vote. Dr. James McClung recommended that the president and two vice-presidents constitute the Program Committee for the future. This plan was unanimously adopted and it was decided to meet six times a year; twice in Richwood, twice in Sutton, once in Webster Springs and one other place in Webster County to be selected. It was decided that the next meeting be held in Braxton County, the first week in May and that Drs. McCauley and Brown have direct charge of the arrangements.

Before adjournment, Dr. Fisher thanked the society for the honor conferred and in a short address stressed the necessity of every rural practitioner being affiliated with a medical organization. He said it was the duty of every physician and that no man could be too busy to participate in the activities of his organization.

Following adjournment, the doctors were invited to the McClung hospital where a delicious supper was served by the following nurses: Miss Mary L. White, R. N., Supt., Mrs. Pearl Morris, R. N., Miss Sidelia Myers, R. N., Miss Madge Brake, Miss Crete Holland, Miss Glenna Malcolm, Miss Ruth Canfield, Miss Evelyn Hembury, Miss Wilma Epling, Miss Rosa McClung, Miss Nora Cruze and Miss Elsie Estep.

FIFTY-NINTH ANNUAL MEETING

Plans Nearing Completion for Morgantown Sessions and Indications Are That Meeting Will Attract Largest Attendance in History of Association

Members of the Mononghalia County Medical Society who will entertain the fifty-ninth annual meeting of the State association are looking forward to a registration of 350 to 400. The general arrangements committee, headed by Dr. C. B. Wylie, is rapidly shaping its plans and the scientific program will be among the strongest yet presented. The Eye, Ear, Nose and Throat program, arranged by Dr. T. W. Moore of Huntington, chairman; and Dr. R. A. Tomassene of Wheeling, secretary, has been completed. The Surgical Section's program virtually is made up and Dr. D. A. MacGregor of Wheeling, scientific secretary of the association, now is correlating the entire program which is to open the morning of May 25 and continue through May 27.

One of the features of this year's program will be a conference of secretaries of component societies to be held probably on Tuesday, May 25, at noon. The secretaries are to discuss county organization activities and problems in a round table discussion.

More than half of the commercial exhibits space has been contracted for and there are several excellent prospects for the remainder. The entertainment committee is planning a banquet to be followed by a dance and Dr. R. W. Fisher, the chairman, believes this will be one of the most enjoyable occasions ever experienced by members.

Golfers who are interested in the tournament plans are urged to communicate with Dr. B. M. Stout, chairman of the committee in charge of this feature.

The house of delegates and the council will hold their preliminary sessions Monday night, May 24, in Hotel Morgan. Those county societies that have not selected their delegates are urged to do so at the earliest possible time. Secretaries of societies are delegates by virtue of their offices and represent the first ten members. Delegates then are elected upon the basis of one for each 25 members or fraction thereof. The preliminary sessions will be held in Hotel Morgan.

Sessions of the association will be held in the Elks' club, the ball room being used for the general sessions and section on internal medicine. The surgical section will meet in a large room on the second floor as will the Eye, Ear, Nose and Throat section. Thus, all sections will be under the same roof.

Members who have not made hotel reservations should communicate immediately with Dr. E. R. Taylor, who is chairman of this committee.

Any information relative to the session will be given by Dr. Wylie or the executive secretary's office.

———o———

FINAL PLANS MADE FOR A. M. A. MEETING

If there are fifteen or twenty members of the West Virginia State Medical association who desire to go to Dallas in a body to attend the American Medical Association meeting, a special Pullman car will be run out of Cincinnati over the Baltimore & Ohio lines under direction of either officials of the Frisco or the Missouri Pacific railroads. Those who would be interested in such a plan are asked to communicate with the executive secretary as soon as possible so that arrangements may be made for the equipment.

The tentative plan calls for the delegation assembling in Cincinnati the morning of April 18 at a place to be indicated if a sufficient number is interested. The Pullman would then be run direct to Dallas and members would avoid the confusion of changing trains in St. Louis.

Members who attend will be granted the convention certificate rate of a fare and a half for the round trip. This same rate will be granted wives of doctors, also, since a meeting of the Woman's Auxiliary of the American Medical Association will be held in conjunction with the other sessions.

If there is a sufficient number who wish to go in this West Virginia special car it is important that the executive secretary be notified within the next ten days.

A COMPARISON OF ORGANIZATION FEES

Recently, at a meeting of the Rotary club in a large city in West Virginia, the chairman turned to a Rotarian seated at his table and inquired:

"What is the greatest service Rotary can perform?"

"Elevating its membership," immediately responded the guest.

And as it turned out, that was the theme of the day's program.

Various committees reported on their activities during the last year and in each, the outstanding feature was that the main purpose had been to instruct members with educational programs on railroads, the state, boys and girls work, treatment of crippled children, and kindred non-controversial subjects—all along the line of "elevating the membership."

The Rotary club in this city assesses an initiation fee of $25 and annual dues, $25. Furthermore, Rotary has a provision that members automatically drop themselves from the roster if members are absent from a certain percentage of meetings without submitting excuses. Few are ever dropped.

Fees for membership in the West Virginia State Medical Association and component societies thereof range from $10.50 to $20 a year, depending upon the activities of the county societies. The state association fee is $10 a year. The purposes of the county societies are identical with those of Rotary except that the county organizations would elevate their memberships in scientific medicine and surgery. Programs are held during the year on the various branches of medicine and surgery, all having educational features.

The medical organization goes even further than Rotary. Its state association maintains in Charleston an executive secretary's office wherein are located the state organization's business affairs. The state association publishes a monthly magazine carrying scientific information to the membership, it performs any service for members that may be desired in Charleston from obtaining auto licenses to checking workmen's compensation claims. It has an automotive insurance department through which members may clear their insurance and save from 25 to 30 percent of the total cost, a net saving that should amount to more than association dues. It keeps records of the membership that permits all affiliated to become members of the American Medical Association, the Southern Medical association and the new Tri-State Medical Society.

Its membership is checked when physicians apply for many federal, state and municipal positions; when appointments are sought to staff positions in many industries.

Membership provides malpractice protection (which is optional to the prospective member) that is a great help when the blackmailers get to work.

It is believed that membership in the medical society goes much further than membership in Rotary but in a different manner. Rotary gives the contact with the world of business—the county society gives the contact with the fellow practitioner and the world of medical science.

To conclude the comparison just given, it might be said that the Rotary dues in the city referred to are $25 a year while the county society's dues, including the medical defense fee, is but $14.

———o———

CELEBRATES 75TH YEAR

The Taylor Instrument Company of Rochester, N. Y., in an attractive bulletin recently announces the celebration of its 75th anniversary. The bulletin tells how the company had an "inventory" 74 years ago show-$919 of which $600 was "good will, or knowledge of the business." Suffice it to say that Taylor values its good will now, at probably more than $600,000.

Discussing how the company is founded upon the ideals of "quality" and "service" the bulletin carries the names of many customers who have been continuous patrons of Taylor since the "50's."

Greetings are extended to the medical profession and in turn, this *Journal* extends to the Taylor company its well wishes for the years to come. —SON.

MRS. HARRY G. STEELE IS CLAIMED BY DEATH

Members of the state association will be grieved to learn of the death of Mrs. Addie Gertrude Steele, wife of Dr. Harry G. Steele, of Bluefield, who died February 26 in the Bluefield Sanitarium. Dr. Steele, one of the councillors and widely known in the state, was in Cleveland with his daughter, Miss Gertrude, who was to have had an operation at that time for goitre, when a message informed him that his wife had suffered a relapse. They reached home an hour after Mrs. Steele's death.

Mrs. Steele before her marriage was Miss Addie Gertrude Hammond, daughter of C. O. and Mary Hull Hammond, of Brookville, Pa. Her father died when she was a child. Later her mother moved to Dayton, Pa., where she some years later died. Mrs. Steele was aged fifty years. She was educated in the public normal school at Brookville and Dayton and later took a business course at Corry, Pa.

On August 4, 1904, she was married to Dr. Harry G. Steele and after their marriage went to Keystone, where Dr. Steele was practicing. Some several years ago they moved to Bluefield. Three children were born to this union—J. Hammond Steele, who is now a student at West Virginia University; Miss Gertrude Hammond Steele and Miss Christine Kertz Steele, all of this city. Mrs. Steele is also survived by two sisters and one brother, Miss Lillie L. Hammond, of Bluefield; Mrs. W. H. Helm, of Jacksons Center, Pa., and Edward C. Hammond, of Carnegia, Pa.

A pall of sadness was cast over Bluefield when the death of Mrs. Steele was known. She was among the city's most popular and respected women, being a devoted wife and mother and a kind and loyal friend and neighbor.

Her home was known for its hospitality, and was at all times open to her numerous friends. Mrs. Steele was a member of the First Presbyterian church of Bluefield, and was active in all branches of church work.

Many members of the association who attended the last annual meeting in Bluefield will remember Mrs. Steele as a charming hostess and all of the membership has joined with state officials in messages of sympathy to Dr. Steele.

Miss Gertrude Steele was operated on by Dr. George Crile in Cleveland March 21.

———o———

AFRAID OF PILLS, ASKS STATE FOR AN ANALYSIS

In Jane Lew, W. Va., there resides a man who likely will call on his family doctor in the future when he gets sick. He received a rather terse reply from officials of the University school of medicine when he sent in a couple of pills for analysis. Here is his letter to the Agricultural Experiment Station:

"Sor:—i am sending you 2 pills i wis you would ex amin them & tell mee wher Thay are of ene good or knot as i gave a Big Prise for them & thay dont seeme too doo mee ene good you will please let me know soone."

There is something rather humorous and pathetic, too, in that letter. It points out the necessity for whole-souled and unified educational endeavors on the part of the entire profession. The experiment station handed the letter to the school of medicine and this reply was sent:

"Your letter addressed to the Experiment Station has been turned over to the School of Medicine, with the tablets. The analysis of these tablets would require considerable time, and we do not do that kind of work. The cost of making the analysis would be considerable, more perhaps than you would wish to pay. Our advice would be that when you are sick to go to a reputable doctor and not buy something of which you have no knowledge. Patent medicine fakers have nothing to offer with which the legitimate profession is not acquainted and the fakers depend for their success upon the gullability of the public who will believe anything concerning the virtue of patent medicine, when they see it in print. You have plenty of reputable physicians in Clarksburg who have had splendid training, and who would treat you with skill and judgment."

PLAN TO ESTABLISH HOMES FOR OLDER PHYSICIANS

Apropos of the establishment of a home for old physicians at Canadea, N. Y., four years ago, and recent negotiations for an estate known as "Downsbury Manor" at Bridgefield, Conn., former home of the late Col. E. M. Knox, a movement recently was inaugurated in New York to form a national organization to establish like homes in different sections of the United States.

The Hon. George Gordon Battle has accepted the chairmanship of the endowment fund campaign and he has associated with him many prominent physicians, bankers, business and professional men throughout the country.

The plan is to have a national organization for the movement as a whole in order to raise the sum of $3,000,0000 or thereabouts the work to be arranged through four conferences or units nationally, the Eastern Conference, centering in Boston and New York, and including the New England States, together with New York, New Jersey, Pennsylvania and Delaware; a Middle West Conference, centering in Chicago, to which all of the Middle West states will be tributary; a Pacific Coast Conference, centering in San Francisco, to which the mining and other Pacific Coast states would be tributary. Later a Douyhrtn Unit will be established with Richmond, Virginia as the organization point, with the Southern States tributary thereto.

A proposition is now afoot to give each medical society representation in the national body through delegates elected from the societies according to their number. These societies would recommend from time to time those worthy old doctors who, being without subsistence, have nowhere to go but the almshouse, as guests of the profession at one of these units.

It is contemplated that the homes should be places with regard to special climate conditions and health conditions, to meet the ills the old physicians may be victims of, and at the same time give opportunity to friends of easy access to those who are accepted as guests in the various home units.

It is hoped that when this movement is well under way that West Virginia's physicians will not be lacking in their co-operation. When we have done our utmost someone may be able to secure an endowment from some worthy citizen of the state who knows the true worth of our old family doctors. —C. A. R.

———o———

BECKLEY HOSPITAL WINS HIGH COURT DECISION

The West Virginia supreme court of appeals on March 2 ruled that Ward Meadows, Raleigh county coal miner, was not entitled to damages from the Beckley Hospital, Beckley, W. Va., for the cost of treatment in another hospital to which he was removed by his relatives after having been operated on at Beckley hospital for injuries suffered in a mine accident.

The damages of $315, the amount of the bill at the King's Daughters hospital, were set aside by the high court in reversing the judgment of the Raleigh Circuit court. The supreme court found there was no record that Meadows did not receive proper care in the Beckley hospital, although it is said that his father and other friends removed him after being told that he probably would die. Physicians at King's Daughters hospital testified that the care they gave Meadows might have been given at the Beckley hospital and Dr. J. H. McCullough of Beckley hospital said the care would have been given had the man not been removed.

The syllabus of the supreme court's decision reads:

"Where a corporation has entered into a contract with a hospital to furnish its employees with necessary hospital treatment, in case of injury to them while in the course of their employment for a consideration paid by each of said employees, and an employee so injured sues in assumpsit said hospital, as for a breach of such contract, relying upon Section 2, chapter 71, Code, for fees for hospital services rendered to him in treatment of his injury by another hospital, the burden is upon him to prove that the defendant hospital did not furnish to him such necessary professional treatment in said hospital, con-

templated by the contract, and as is ordinarily furnished at hospitals of like kind and character in the same community, acting under like circumstances; and, further, that such failure was not the result of the act of the plaintiff."

———o———

BOARD WILL STUDY EFFECTS OF GAS IN WAR

At the request of the American Legion and other agencies, General Frank T. Hines, director of the U. S. Veterans Bureau, upon the recommendation of Dr. Crossman, Medical Director, has appointed a Board of Medical Officers to conduct an investigation and make an intensive study of the residual effects of warfare gases.

The members of this Board are:

Dr. A. K. Krause, Member of the Group on Investigation and Research of the Medical Council of the U. S. Veterans' Bureau and Associate Professor of Medicine at John Hopkins University.

Lt. Col. Harry L. Gilchrist, M. C., U. S. A., Chief of Research Division, Chemical Warfare Service, United States Army.

Dr. Philip B. Matz, Chief, Medical Research Sub-division, United States Veterans Bureau.

This Board held its first meeting March 9, 1926, and decided to at once begin the study of the present status of some 70,000 men who were gas casualties during the World War. This will extend over a period of 12 to 18 months.

Outside of the knowledge obtained from experimental work on animals very little is known about the remote effects of the various war gasses on the body economy.

———o———

THREE WEST VIRGINIA MEMBERS ARE HONORED

Three members of the state association were honored by being elected Fellows of the American College of Physicians at the Detroit session held the week of February 22-27. They are L. C. Davis of Fairmont; S. J. Morris of Morgantown, professor of anatomy at the University of West Virginia; and C. A. Ray, editor of *The Journal.* The College of Physicians is made up of leading internists in the United States and Canada and Fellowship is an honor highly prized by its membership. The aim of the organization is to develop and dignify the practice of internal medicine and the dispensing of internal medicine.

The sessions in Detroit especially were instructive. The time was largely divided between the hospitals of Detroit and the University of Michigan Hospital at Ann Arbor. The following West Virginia physicians, in addition to Doctors Davis, Morris and Ray, were in attendance: R. G. Broaddus, Hinton, F. C. Hodges, Huntington, Oscar B. Biern, Huntington, James S. Klump, Huntington, Walter E. Vest, Huntington, John N. Simpson, Morgantown, S. J. Morris, Morgantown, R. W. Fisher, Morgantown, C. W. Waddell, Fairmont, and W. S. Rowan, Logan. and W. S. Rowan, Logan.

———o———

BOARD OF OTOLARYNGOLOGY

The American Board of Otolaryngology has arranged for two examinations during the month of April as follows: St. Paul's Sanitarium, Dallas, Texas, Monday, April 19th, at 9. A. M. Stanford University Medical School, Clay and Webster Streets, San Francisco, California, Tuesday, April 27th, at 9 A. M. Applications may be secured from the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

———o———

MEMBERSHIP IN MEDICAL SOCIETY IS STRESSED

Advantages of membership in county and state medical societies are stressed in a leading editorial published in a recent edition of *The Boston Medical and Surgical Journal.* The article reads:

"The question sometimes asked by persons who have been advised to join the Massachusetts Medical Society is in effect, "What is the advantage to be derived from membership?" or in the language of the street, "What do I get out of it?

"The answer to this question is identical with that given so often when membership in organizations designed to benefit the public and individual members is under con-

sideration, viz., a member usually profits in proportion to contributions made by him. Contributions in such cases mean participation in work of the organization rather than money or membership dues.

"The Massachusetts Medical Society was founded on the principles laid down in the preamble to the Act of Incorporation where it is stated that 'As Health is essentially necessary to the Happiness of Society; and as its Preservation or Recovery is closely connected with the Knowledge of the Animal Economy and the Properties and Efforts of Medicines', etc. Herein the Commonwealth by its endorsement of the preamble notified the members of the Society that the fundamental obligation of the members is to preserve health, and it was then clearly understood as it still is, that the efficiency of the individual is enhanced through association with others engaged in the same activities. Hence, the primary obligation is to serve the Commonwealth in caring for the health of the people, and in order to do this in the most effective manner the founders provided for co-operation through membership in a society. In a broad way, it is the duty of every well-qualified practitioner to join a medical society and after joining, to contribute such activity as his ability may warrant toward making medicine perform its functions. As one contributes to the dissemination of knowledge through association with his fellows, he will add to his own and thereby gain prestige. Conversely, one who is carried as dead freight only contributes the small amount of his annual dues.

"Membership is secured through the district society where one may become familiar with the routine of medical meetings, the election of officers, the system of making reports, the financial substructure of the Society and the opportunities for service. If he is the victim of an inferiority complex or, in other words, lacking in ambition or energy he will remain in the background and in all probability will take his position in lay society very similar to that occupied in the professonal body.

"On the other hand, if he is interested in the proceedings, prepares himself for participating in discussions and demonstrates loyalty, there will be found opportunities for enjoyable activities. He will grow.

"Preparation for society activities means study of medical literature, availing himself of every reasonable opportunity for consultations and association with prominent members.

"A very definite personal advantage lies in the protection which the society gives in the event of a law-suit in connection with practice.

"It is the privilege of every member to show interest in the work of the officers. In order to do this effectively all reports should be scrutinized and errors or inaccuracies brought to the attention of officers in charge, for secretaries and treasurers devote considerable time to corrections which result from inattention of members.

"All men entering the practice of medicine should be familiar with public health laws and regulations and regard themselves as parts of the public health activities of the state. A very important feature of the doctor's life in a community is that concerned with the education of those under his care in all matters of preventive medicine and unsound practice. A doctor should be a self-appointed teacher, as set forth in section one of the Code of Ethics of the Massachusetts Medical Society. If this responsibility had been universally met there would be less opposition to vaccination, animal experimentation and scientific medicine.

"The officials of the state and district societies are hard at work combatting errors. Their labor is often unproductive because of the indifference of the rank and file of the profession."

THE FIFTEEN "GREATEST" ARE PICKED BY HYGEIA

Hygeia, popular health magazine published by the American Medical Association, has selected what it considers the fifteen "greatest physicians of all times." The selection follows:

1. Hippocrates, father of modern medicine, whose school and writings formulated our knowledge of medicine.

2. Galen, who described the action of the heart valves, elevated the status of the medical profession and collected the knowledge of his time in a system of medicine which was followed by physicians for centuries.

3. Leonardo da Vinci, artist and inventor, who contributed greatly to the science of anatomy.

4. Vesalius, father of modern anatomy.

5. William Harvey, representative of the renaissance of medicine, who first described scientifically the circulation of the blood.

6. Sydenham, greatest figure in medicine of seventeenth century, who wrote excellent descriptions of several disease conditions.

7. John Hunter, father of surgery.

8. Auenbrugger, who first described the method of tapping the chest for the determination of conditions beneath the skin.

9. Laennec, who first described use of the stethoscope for listening to sounds within the chest.

10. Pasteur, father of the conception of bacteria as the direct cause of many diseases.

11. Robert Koch, discoverer of the tubercle bacillus, who established bacteriology as a science.

12. Lister, who showed how bacterial infection may be prevented.

13, 14 and 15. James Young Simpson, William Morton and Crawford Long, who first made use of anesthetics and made surgery painless.

Photographs and biographical notes of these fifteen great men will appear in succeeding numbers of *Hygeia.*

SAFE, SANE FOURTH CAMPAIGN RENEWAL

In these days when the quest for health includes all sorts of efforts to prevent disease and prolong life, there is something almost criminal in the reckless abandon with which certain agencies are permitted to continue their menace of life and limb. Asserting that the care of individual and family health is the first and most patriotic duty of a citizen, Chief Justice Taft has urged a more vigorous attack on the factors that may impair the efficiency of the race. While it is true, he remarks, that to the public mind there is a more lurid and spectacular menace in such diseases as smallpox, yellow fever and plague, medical men and public health workers are beginning to realize that, with the warfare against such maladies well organized, it is now time to give attention to the heavy loss from lowered physical efficiency and chronic, preventable disease—a loss exceeding in magnitude that sustained from the more widely feared communicable diseases. But there is an added menace in all forms of carelessness that lead to preventable accidents. A recent writer, recalling the horrors of military struggle that have revealed the losses we sustain from warfare, reminds us that there is a daily battle going on with the forces and agencies that menace us in our environment.

We make much, and quite properly so, of the preventability of accidents. Museums of safety have been established to demonstrate this. It was reported by Ditman* several years ago that of 29,000,000 workers in the United States more than 500,000 are killed or crippled yearly as a direct result of the occupations in which they are engaged—more than were slain and wounded throughout the whole Russo-Japanese war. More than half of this tremendous sacrifice of life is needless. The perils that certain trades have for workmen have become the subject of regulatory legislation. The industries are continually being warned, reformed or compelled by legal enactment to make life and limb safer for their employees.

Yet there are other completely avertible perils that are faced unnecessarily and foolishly to an extent that reflects on our national intelligence. They do not lie in the path of duty. They are not incident to the demands of human welfare or progress. Among them is the Fourth of July menace, in which the innocent are all too often made to suffer with or instead of the guilty. A few years ago it seemed as if sanity were about to be the keynote of the celebration of Independence Day. Largely through the efforts of *The Journal*, the character of the dangers of earlier recklessness was widely emphasized. Much has been accomplished since in the way of reform. How great the need of added restriction is follows from the

statistics of the past year. The Surgeon General of the United States Public Health Service has pointed out that in thirty-six states 111 persons were killed and 1,030 injured as the result of celebrating with fireworks last July 4. Of the injured, 148 probably will lose the sight of one or both eyes. In many cases, Dr. Cummings says, injury or death was due to fireworks considered harmless, such as sparklers, blank cartridges, cap pistols, skyrockets, small firecrackers and roman candles. Hence Surgeon General Cummings recommends in his annual report a renewal of the campaign against the use of fireworks on Independence Day. No one knows better than the physicians of this country how large a measure of wisdom this represents. It is not too early to sound the note of warning; and it needs to be repeated often and loudly.—*Jour. A. M. A.*, Jan. 23, 1926.

---

* Ditman, N. E.: Education and Its Economic Value in the Field of Preventive Medicine, Columbia University Quarterly, Supplement to June, 1908, p. 38.

---o---

GASTRIC ACIDITY IN SYPHILITIC CHILDREN

Twenty-one children, from 4 to 13 years of age, with positive Wassermann reactions, who were under treatment with neo-arsphenamine for varying periods, were studied by Maurice Dorne, W. A. Brans and I. Harrison Tumpeer, Chicago (*Journal A. M. A.*, Jan. 23, 1926), with regard to their gastric acidity. As a group these syphilitic children manifested a value of 9.5 free acidity against 19.4 of the controls, proportionately 50 per cent. Total acidity values are 24.9 against 41.6, a proportion of 60 per cent. From the standpoint of individual cases, one of the twenty-one syphilitic children gave a free acidity above the normal average, 19.4, as compared with seven of the seventeen controls, or 4.4 per cent against 41 per cent. There were twenty of the twenty-one syphilitic children below the normal free acidity average, as compared with ten of the seventeen controls, or 95.6 per cent against 59 per cent. This analysis indicates that the syphilitic child is, approximately, one tenth as likely to manifest free acidity above the normal average (4.4 per cent against 41 per cent) and, approximately, twice as likely to manifest lowered acidity as the normal child (95.6 per cent against 59 per cent). As regards total acidity, three of the twenty-one gave values above the normal average, 41.6, as compared with seven of the seventeen controls, or 13.7 per cent against 41 per cent. Below the normal total average were eighteen of the twenty-one syphilitic children compared with ten of the seventeen controls, or 86.3 per cent against 59 per cent. This analysis indicates that the syphilitic child is approximately one third as likely to manifest total acidity above the normal average as the normal child and approximately half again as likely to run below the normal average. The findings of Neugebauer are substantiated in these observations in children. Viewed from all angles, the data demonstrated lowered acidity in the gastric contents of syphilitic children.

---o---

CONCERNING LEGISLATION IN NEW YORK STATE

The New York profession is again confronted by a legislative session. Concerning legislation, the *New York Journal of Medicine* has the following to say:

"Physicians are compelled to be on the defensive against many bills. There are chiropractor and naturopath bills whose objects are clearly evident. There are other bills drawn so cleverly that only an expert can discern their hidden import; but their disguises are plainly evident to those who have kept track of medical legislation for years.

"The physicians of New York state are now in a position to handle medical legislation better than ever before. The committees on legislation in past years have made an excellent reputation for the physicians, and the legislators are outspoken in praise of those who are responsible for presenting the point of view of the physician. It remains for the doctors of each district to impress their legislators with their own scientific outlook on public health problems."

"TRUTH IN ADVERTISING" CAMPAIGNS IN THE PRESS

The time is coming when newspaper publishers in general must look into the matter of censoring the patent medicine advertising in their columns if they would live up to the ethics involved in their slogans—"Truth in Advertising."

Recently the West Virginia Publishers association, in annual session at Wheeling, was asked how many had endeavored to censor such advertising to protect the public's health from the claims of "bucketshop" proprietary medicine manufacturers. It was pointed out that publishers generally refuse to accept the advertising of those who would exploit spurious fake stock. It is pointed out that the public is protected there but the question comes to mind which is more important: inviting the reading public to buy fake stock or fake patent medicine "remedies."

One of the latest "cures" relates that by putting a pinch of the product in one's shoes each day for 75 days promotes circulation through the feet and "cures" rheumatism, neuritis, malnutrition, liver trouble, appendicitis, eczema, nervous debility, chronic constipation, asthma, "stomach trouble", "heart trouble", poor circulation, gas on the stomach, etc.

Sometime ago there was published in the Holyoke, Mass., Daily Transcript a medicine ad relating that a man had been relieved of stomach trouble and had gained ten pounds in weight since taking Tanlac, "the national tonic." In the same issue of the same paper under the heading Funeral Notices the name of the same man was found, indicating that he had been permanently relieved of his stomach trouble, but in a manner not satisfactory to his friends. The death certificate indicated cancer of the stomach. The chances are that the family doctor got the blame for "losing" the patient whereas the testimonial published in the day of his death would indicate that the man had not taken the family doctor into his confidence until it was too late to be of any service.

In the Boston Medical and Surgical Journal on March 11 was published a list of objectionable patent medicine advertisements, all taken from the pages of one issue of a reputable Boston newspaper. The paper in question was the Boston Herald. The Journal further says:

"A further casual scanning of the pages of the *Herald* from day to day reveals a periodic publication of advertisements of Lydia Pinkham's Vegetable Compound and Lydia Pinkham's Pills for Constipation. One insertion draws attention, in a very touching manner, of two babies born in the year 1819 'whose lives were destined to have a far reaching influence.' They were Queen Victoria and Lydia E. Pinkham.

"The disciples of Lydia surpass the proprietors of practically all other patent medicines in this zeal for unethical advertising volume, but Carter's Little Liver Pills still crop up and 'Prove Mother is Your Closet Friend', and Hill's Cascara Quinine, in a rather startling headline, claims to have paid $1,000,000 for its method of stopping colds with a remedy developed some years ago in a famous laboratory that announces its creations to physicians only.

"After witnessing this broadside of seductive literature one reads a subtle note of irony into a modest insertion in the *Herald* which, under the heading 'Truth in Advertising' continues, 'We know that the advertising in this paper is fundamentally honest and sincere. But being only human, the most conscientious advertiser sometimes makes an inadvertent misstatement or inaccuracy. If you find any such, please report the case to us or to the Boston Better Business Commission.' If the editors of the *Boston Herald* really believe that such a futile little smoke screen can hide their responsibility for their advertising columns they are to be pitied, not censured.

"We crave indulgence for one more reference to the contents of the *Herald*. Very recently, in an editorial entitled "A Mail Order 'Gun' Did It," the *Herald*, with an admirable sense of the duty it owes to the protection of the public decries the ethics of a concern that sells lethal weapons by mail. 'High class mail order houses,' it states, 'have abandoned this kind of business. Has not the time arrived to put a stop to it altogether?' The *Journal* is firmly convinced that palliative patent medicines, sold largely as a result

of their newspaper advertisements, do infinitely more harm than mail order guns. We would remind the *Herald* that high class papers have abandoned this kind of advertising. Has not the time arrived to put a stop to it altogether?"

HELP CORN SITUATION BY USE OF CORN SUGAR

There is at present a popular prejudice against foods that have been made in the chemical laboratory. This extends to forms of sugar other than cane or beet sugar, says *Hygeia* in the April issue.

Lately milk sugar and malt sugar have come into use for babies, and maple sugar is a favorite with children. As a result, of the prejudice against other sugars, the pure food laws do not permit the use of the term sugar for any but the cane sugars. This has meant that if packers used corn sugar, and labeled the article to that effect, as is required, the food would be unpopular.

Most people do not know what chemists recognize as sugar many substances besides cane and beet sugar. Chief among these is dextrose, also known as grape sugar, corn sugar, or glucose, which is produced by the chemical breaking down of starch. This process goes on also in our bodies, producing glucose from cane, malt or milk sugar or starch which we eat, and glucose is the form of sugar in which the carbohydrates, or sugars, circulate in our blood.

In a comparison of sweetness of the sugars recently made, using cane sugar as standard with a sweetness of 100, corn sugar was rated as 74 and fructose, another sugar obtained from certain vegetables, as 173. In view of the economic condition produced by the unusually large corn crop of the last season, it would be well to overcome the popular prejudice against any but beet or cane sugar, advises *Hygeia*.

GENIUS MAY BE WRETCHED; FOOLISH MAY BE HAPPY

On the use we make of our knowledge, rather than the extent of it, depends our happiness, says Dr. H. Douglas Singer in the March *Hygeia*. A feebleminded person can be happy and relatively efficient, while genius is no preventive of unhappiness.

The quality of our brains and their capacity for acquiring knowledge differ at birth. However, for all types of men, with all qualities of brains, there is useful work and happiness to be found. If we are trained to suitable habits and suitable activities, we may become equal in the degree of our usefulness and happiness.

POST OPERATIVE ILEUS

Dr. Tasso Asteriades, Chief Surgeon of the French Hospital of St. Paul cites his preferred treatment for acuate post-operatory spasm of the ileus in *Lapresse Medicale*, No. 89, of November 7, 1926 and again in the same Journal, No. 8 of Jan. 27, 1926, page 126.

This can occur very rapidly after abdominal operation, and he points to the diagnosis as distinct by its complete absence of intense pain, etc., which is characteristic of any acute volvulus.

Such spasm of the ileus, with its dilation of the abdomen, complete failure to avacuate matter or gas from the intestine, in cases without fever and with almost normal pulse after a completely aseptic operation is thus diagnosed from any general peritonitis and from the acute volvulus with its sudden onset, violent pains and syncopal condition of the patient.

This spasm of the ileus, he treats by immediate spinal anesthesia which causes rapid relaxation of the abdomen and evacuation of the intestine of its matter and gas and practically immediate restoration of a good general post operatory condition, completely removing in a few hours time all idea of recourse to another abdominal operation as needed for the relief of such spasm.

There is always time for the second operation if the spinal anesthesia should fail to produce the complete relief within a few hours. —W. S. M.

TRI - STATE SOCIETY WILL MEET MAY 5TH

The Central Tri-State Medical Society will meet at the Hotel Prichard, Huntington, West Virginia, at 2:00 p. m., May 6th, 1926.

Dr. G. W. Crile, of Cleveland, will talk upon Goitre. Dr. John A. Kolmer, Chief of the Laboratory of the University of Pennsylvania, upon the Pathology and Immunity of Syphilis in Relation to Serum Diagnosis and Treatment; and Dr. Stewart Roberts, Professor of Medicine, Medical Department of Emory University, Atlanta, Ga., upon the Heart Muscle. These are among the most prominent members of the profession in the United States. There will be a dinner at 7:00 p. m.

VACCINATION TO PREVENT TUBERCULOSIS STRESSED

At a meeting of the Academy of Science, Paris, February 23, 1926, Professor Calmette of the Pasteur Institute communicated the results thus far obtained with his vaccination of new-born children to prevene tuberculosis.

"No one of the children subjected to this vaccination in the years 1921 and 1922 has succumbed to any disease of tubercular origin."

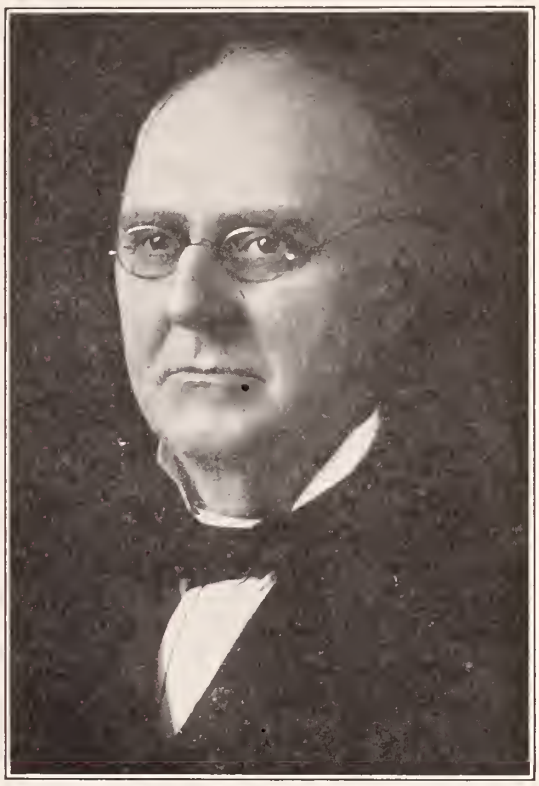
In 1924 and 1925, a total of 5183 babies were vaccinated. Public Health Bureau statistics have established beyond controversy that of children born in infected surroundings of tuberculosis, from 25 to 32 per cent of them die from tuberculosis. Among all children thus far vaccinated by this method, 7.2 per cent have died from diseases other than tuberculosis. Seven tenths of one per cent of these children died of what might be presumed to be tuberculosis.

Experiments carried out at Liege, Belgium, and at Dakar, West Africa, have produced similar results. The vaccine appears to maintain its efficiency from 15 to 18 months.

It would seem that the future will show the desirability of vaccination of all such children at the end of the first and third years. —W. S. M.

DEATHS

PAST PRESIDENT DIES



Dr. Charles Summerfield Hoffman, 71 years old, past president of the West Virginia State Medical Association, died February 11 in his office at Keyser, W. Va.

Dr. Hoffman was born in Green Valley, Bath County, Virginia, November 13, 1854. He was the son of the Rev. Henry Hoffman and Elizabeth Perry Huntley Hoffman. He was educated in the public schools until 15 years old when he took a position in West and Huffman's drug store in Keyser. He worked there two and one-half years. In 1873 and 1874 he attended Louisville Medical College and returning home, went into Huber Moss' drug store.

Returning to school Dr. Hoffman elected to attend Jefferson Medical College, Philadelphia, graduated in medicine in 1877 and established a practice in Keyser where he remained. On October 14, 1880, he married Annie M. Walker, who died August 28, 1925.

The following children survive: Mrs. Elizabeth Hoffman Carskadon, Elsie R. Hoffman, H. Huntley Hoffman and Wilbur E. Hoffman.

Dr. Hoffman joined the West Virginia Medical Association in 1894. He was elected president in 1899 and presided in 1900. He was a member of the House of Delegates of the American Medical Association in 1910 and was elected a member of the American College of Surgeons in 1913. Dr. Hoffman was one of the organizers of the Grant-Hampshire-Hardy-Mineral Medical society.

He was a member of the Volunteer Medical corps and a member of the medical executive committee in West Virginia during the world war. He was chairman of the local advisory board during the war and he had been president of the United States Pensioning board in Keyser for years.

Dr. Hoffman started the Hoffman hospital December 3, 1903. He was surgeon for the Baltimore & Ohio railroad since 1880 and had been surgeon for the Western Maryland railroad for many years. He was a member of the board of examiners for graduate nurses in West Virginia from 1919 to 1921.

Dr. Hoffman wrote several articles for publication which were read before medical societies, among the subjects being:

"Ovariotomy for Cystic Sarcoma in Child 33 Months Old," West Virginia Medical Transactions, 1895.

"Gun Shot Injury of the Brain," West Virginia Medical Transactions, 1895.

He was among the first to advocate establishment of a state tuberculosis sanatorium, this being the feature of his presidential address in 1900. Dr. Hoffman is said to have been the only surgeon in the world to report two cases of double dislocation of hips, with a special plan for reduction. These reports were published in *The West Virginia Medical Journal* and *The Journal, A. M. A.* He had many other articles published in different Journals.

The deep sense of their loss as a community is eloquently expressed by the editor of *The Mineral Daily News*, of Keyser, W. Va., in an editorial from which the following is an excerpt:

"Not because he has been a loyal supporter of the *News* since its inception; not because he was a true and helpful friend of the editor; but because he was the one most nearly indispensable man of the community. Other men have done useful work for the community; other men have been sadly missed when they left us. But none has given so wide a range of service so long continued."

———o———

Irvin Hardy

The death of Irvin Hardy, 52 years old, of Morgantown, professor of principles and practice of surgery at the university, comes as a shock to members of the profession. Dr. Hardy died February 3rd in the Western Pennsylvania Hospital, Pittsburgh, of heart disease.

Dr. Hardy was born at Dunbar, Pa., July 4, 1873, the son of James M. and Sarah Keffner Hardy. He obtained his early education in the public schools of his home community and later entered Milton academy at Baltimore, Md. Upon completing his preparatory course he entered the College of Physicians and Surgeons at Baltimore and later attended Johns Hopkins University in the same city. Following his period at Johns Hopkins he entered the Queens University of Kingston, Canada, graduating from that institution with the degrees of Doctor of Medicine and Master of Surgery. Upon completing his courses he took the examination and was licensed to practice in West Virginia, Pennsylvania and Maryland. Two years ago he took post graduate work in the University of Vienna while Mrs. Hardy and his daughter toured abroad.

In the autumn of 1895 he removed to Davis, W. Va., where he established the Allegheny Heights Hospital, and conducted the same for a number of years, in association with Dr. Robert Hardwick.

In 1911 he sold his interest in the Davis hospital and removed to Morgantown, where a short time later he purchased the City hospital in association with Dr. T. Jud McBee. Three years later Dr. McBee disposed of his interest and Dr. Hardy became the

sole proprietor of the institution which he has conducted since that time.

Dr. Hardy was married to Miss Nina M. Twyford of Allegheny City, Pa., September 18, 1895 and his widow survives, together with one daughter, Miss Edith L. Hardy at home. His mother died some years ago and his father died in November. Two sisters living in Dunbar, also survive.

Dr. Hardy was a member of the Methodist Protestant church, of the Independent Order of Odd Fellows and of the several Masonic bodies including both the York and Scottish Rite branches. He was also a member of the Theta Kappa Psi medical fraternity of the University.

---o---

J. C. Hurst

J. C. Hurst, pioneer medical practitioner of Raleigh county, died at his home in Saxon, W. Va., Friday, March 19. He had practiced more than 50 years and his death marks the passing of one of the oldest physicians of the state. He frequently rode horseback 20 and 30 miles to visit patients. Death came suddenly as he attempted to arise from his bed. Mrs. Hurst, children, grand children and a number of great grand children survive.

---o---

BOOK REVIEWS

LECTURES ON NUTRITION. *Mayo Foundation Lectures, W. B. Saunders Co.* The contents of this book are six lectures; four on the subject of Metabolism, one concerning Vitamins, and one on The Relations Between Fertility and Nutrition.

Those physicians interested in metabolism will obtain from the first four lectures first hand information from authoritative sources, written in a very readable style and void of the excessive use of new terms.

The first lecture, "The Measurement and Significance of Basal Metabolism," by Francis Gano Benedict is of particular interest to the owner and operator of apparatus for determining the basal metabolic rate. The real meaning of basal metabolic rate, the reasons for the various precautions to be taken when the apparatus is properly operated, and the explanation of the formulae used are all simply and of course scientifically stated.

The lecture "Problems of Metabolism" by Graham Lusk, is general discussion of the subject and is given with a good bit of literary style, making it readable and interesting.

The third lecture, "The Proportions in Which Protein, Fat, and Carbohydrates are Metabolized in Disease" is by Eugene Floyd DuBois, Medical Director of Russell Sage Institute of Pathology and gives the medical side of metabolism as it refers to patient and physician.

"Muscular Activity and Carbohydrate Metabolism" by Archibald Vivian Hill of London is of particular value to those interested in Physiology.

Elmer Verner McCollum of John Hopkins University gives a lecture on "Vitamins," and from these sixty small pages is obtained a mine of authoritative information on a subject which is comparatively new. The nature of vitamins is unknown and their physiologic functions are not understood and for these reasons there has been much semi-authentic news, some of it the propaganda of unscrupulous food and drug concerns.

The last lecture is by Herbert McLean Evans, Professor of Anatomy at the University of California "The Relations Between Fertility and Nutrition"; it is essentially scientific and is substantially identical wth a report submitted to the National Academy of Science at their annual meeting in April, 1925.

Anyone interested in metabolism and nutrition who desires to spend a profitable and pleasant evening should read this book of lectures. —G. B. C.

---o---

"OUR PRESENT KNOWLEDGE OF HEREDITY"—*Published by W. B. Saunders Co.* This book of 250 pages is a series of six papers delivered under the auspices of the Mayo Foundation at various universities. All papers are written by specialists and report advanced original work in this subject.

The chapter on "The Inheritance of Ac-

quired Character" is of particular interest. The relative importance of heredity as compared to environment has, from the beginning of time, been a subject of controversy. Darwin, Lamarck and others believed that development is largely through natural selection and by inference, at least, taught that acquired characters are transmissable. Later, Wiseman brought out the theory that germ cells have nothing in common with somatic or ordinary body cells, which would mean that characters are transferred from generation to generation through the germ cells, entirely independent of the body acting as their temporary host. Admitting this theory, we have then to account for the large number of developmental changes occurring in any species. The explanation given is that of mutation, that is, the disposition of protoplasm to undergo sudden and unaccountable changes in any direction. In accordance with this theory, only those individuals survive who can adjust themselves to their environment. Following the work of Wiseman, many biologists began boldly to teach that heredity means everything and that environment has little to do with the development of the race, a theory hardly consistent with experience. The difficulty with the whole matter would seem to be that Wiseman's theory has never been definitely proven nor does it seem susceptible of proof.

Two chapters are given to the subject of heredity in relation to cancer. This matter is of great interest to every physician. The theory of the non-transmissability of cancer has heretofore, been generally held, the American Society for the Control of Cancer having published definite statements to this effect. The circumstances are such that it is practically impossible to make accurate observations on this subject in the human. Since the same biologic law applies to all animals alike, we are compelled to depend on experiments made on short-lived animals. Maud Slye was able, in carefully controlled experiments, to breed twenty generations of mice free of neoplasms. This is an experiment of great practical interest and should tend to keep us open-minded in the matter of heredity as related to cancer.

The closing chapter has to do with eugenics and presents this broad subject in forceful manner. The author suggests that certain classes of confirmed criminals and mental defectives ought to be segregated so as to prevent their propagation. He also points out certain practical difficulties in carrying this plan into effect. This principle is so sound as to require no argument.

Altogether, the book is an excellent presentation of modern thought as it relates to this very obscure and little understood subject. It will be read profitably not only by physicians, but by educated persons generally. —J. R. H.

———o———

A TEXTBOOK OF JHYSIOLOGY *By Wm. D. Zoethaut, Ph. D., published by W. C. Mosby Co. $4.50.* This physiology is intended to supply the demand between the larger textbook and the briefer course. It has 604 pages, and 12 pages of index with 186 illustrations. It has 23 chapters, and of the illustrations many are original and all are good. There are many fine chapters in the book from the first one on Protoplasm to the last one on Reproduction. The chapters on the blood, circulation of the blood, respiration, digestion, metabolism, the internal secretions and the sense organs strike one as being well done, but you have a doubt whether you should pick anything for special commendation. The work is clearly written and seems to keep up with procession as the vitamins are well described, along with the endocrines, basal metabolism, etc. This book will be enjoyed by the physician reading chapter after chapter, and he will find much that is old. But there is also much that is new and he will enjoy it all. There are a few things we did not find such as the word vitalism, which some physicians who were brought up on Landois would look for. It enables us to understand how the crippled heart lasts 20 years, 30 years and still does its work. But then probably we should not expect it in so concise a work. It's a credit to its author and trust he will do more toward advancement of medical science along this line. —C. O' G.

The West Virginia Medical Journal

Directed and Edited by the Committee on Publication

[The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible]

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS:

WALTER E. VEST, Huntington — HARRY M. HALL, Wheeling — J. HOWARD ANDERSON, Marytown — C. W. WADDELL, Fairmont

MR. S. O. NEALE, *Secretary-Business Manager*, Charleston

Entered as Second Class Matter, January 1, 1926, at the Postoffice at Charleston, West Virginia

Volume XXII MAY : 1926 *Number 5*

BILIARY SURGERY*

By A. C. HARRISON, M. D.

Baltimore, Md.

NOTE—This is believed to be the last public address by Dr. Harrison, and it is published as a memorial by his friends and former students in West Virginia.

MR. PRESIDENT, Ladies and Gentlemen: It is a bit awkward to desist from the pleasantries and sort of talk we have been having, to the purely technical, and I am afraid it will be a little dry.

Now, I have nothing new to tell the members of the Kanawha Medical Society but to consider the subject in general. You know it has been said, "There is nothing new under the sun," and certainly there is little or nothing new in the development of biliary surgery. But I want to start off by stating that the present status of that group of pathological conditions variously denominated cholelithiasis, or gall stone disease, cholecystitis, cholangitis, etc., is not wholly satisfactory, as is attested by many facts. The current literature teems with articles debating the subject by both the great and the near great. They, for the most part, deal with various methods of treatment, some advocating medical treatment as the sheet-anchor, but most of them debating the advantages or disadvantages of various operative procedures. Others again relate in extenso various experimental procedures in a, so far, vain effort to establish the function or absence of function of the gall bladder.

A goodly number of able surgeons with whom I have discussed the subject, are quick

* Read before the annual meeting of Kanawha County Medical Society, Dec. 15, 1925.

to admit that the surgery of the biliary tract is one of their most unsatisfactory fields, if one views it from the standpoint of complete relief from morbidity. Or, if you will, ask the gastro-enterologists. They handle most of these cases before they get to the surgeon and they continue to treat a large percentage of the same cases for varying degrees of morbidity after the surgeon has done his best. I believe this statement to be true, never mind what surgeon has done the work or what type of operation he has performed.

It has seemed to me that one of our chief faults is a mistaken or at least an inadequate concept of the underlying cause and course of this diseased condition and that the usual text-book description and teaching should be recast. We should get away from the idea of "gall stones" as the essential entity of the condition. Though usually present in well marked cases, their presence is not an essential element and they should be looked upon as one of the many complications of a disease process and not as the disease itself. The real entity of the disease is infection of the biliary tracts and it is doubtful if this infection is ever limited entirely to any single part of these tracts, though its maximum expression is usually found in the gall bladder and this is because its adequate drainage is most easily interfered with. In the same way gall stones, once formed, become a dominating element because they produce obstruction to drainage. In themselves, gall stones produce no symptoms except when they interfere with the free outflow of bile. They require removal in order that the normal flow of bile may be reestablished.

Dr. Archibald Cunningham Harrison

Surgeon, teacher and friend. Born in Virginia in 1865, he graduated from the University of Maryland School of Medicine in 1887. His ability was such, that his rise in his chosen profession was rapid and a few years later we find him occupying the chair of anatomy and surgery at the College of Physicians and Surgeons of Baltimore, and in recent years he was professor of surgery at his alma mater, the University of Maryland. He was a prominent member of the staffs of the following hospitals: Mercy, St. Josephs, Baltimore Eye, Ear and Throat Hospitals, the Church Home and Infirmary and the Hospital for Women of Maryland. He was a past president of the Medical and Chirurgical Faculty of Maryland, served his Country in the late war and with the rank of Lieutenant Colonel, commanded the University of Maryland medical unit in the A. E. F. He died on January 17, 1926, from heart disease.

As a surgeon he ranked with the best, doing a great volume of work, the strain of which, probably hastened his death. As a teacher he was unexcelled. He taught not only the science of anatomy and surgery, but always impressed his students with the importance of justice and fair-play towards their patients as well as their fellow-practitioners. As a friend he was endeared to all, and was loved most by those that knew him best. While he has passed from amongst us, his works will long live after him in the knowledge and surgical skill of the many younger men that he has trained during his years as a teacher. —B. H. S.

If, as I now believe, free drainage, either through its natural route or one artificially established, is the fundamental element in the treatment of this condition, then the complete removal of all obstructing elements from the ducts and gall bladder with the establishment of free drainage until the infection and inflammatory products can be removed, should be the logical end sought for in devising the type of operative procedure.

The term drainage as used in this paper means drainage through the natural route or routes artificially established with the alimentary tract; tubular drainage direct from the ducts or through the bladder to the outside and simple drainage of the abdominal cavity as occasion may dictate in the individual case.

The Meltzer-Lyon treatment, which is now so popular with the medical fraternity, has for its

object the dilation of the sphincter of Oddi, in order that the contents of the biliary ducts, and perhaps to some extent the gall bladder, may flow freely into the duodenum and thence be pumped out through the Einhorn tube. This is simply an effort to establish drainage through the natural route and if it has any curative value it must be dependent upon the completeness of this drainage.

In the earlier days, we were well satisfied to clear the gall bladder of its obstructing elements and establish tubular drainage through it (cholecystostomy) and when necessary, the common duct was attacked in the same manner and tubular drainage established direct from the duct, (choledochotomy).

At a little later period we began to liken the gall bladder to the appendix vermiformis, considering it, like the latter, a useless appendage and a source of trouble only, and therefore it should be removed, (cholecystectomy). Gradually this became the operation of choice and as a result, in a large proportion of cases, those gall bladders which were but moderately if at all diseased, were removed. On the other hand, many of those which were badly crippled were left because of the great difficulty of their removal or because of the extreme illness of the patient.

In considering the subject, generally, it should be borne in mind that the four major organs of digestion, the stomach, the duodenum, the liver and pancreas form a quartet accustomed to working in close harmony and that disturbance of any one of them will throw the machinery out of gear producing disharmony. As a result a long train of symptoms are produced which largely overlap, making exact diagnosis difficult and sometimes impossible. If the disease has lasted for a long time, which is all too often the case, all of these organs become more or less involved in the disease process. Though the maximum of the gross pathology is commonly found in the gall bladder, I doubt if it is ever true that this part of the duct system is involved alone. Therefore, it is quite incorrect to liken this organ to the vermiform appendix. As a rule when one removes a diseased appendix all of the pathology is removed with it but this is by no means true of the diseased gall bladder.

There is still much debate as to whether we shall adopt cholecystostomy or cholecystectomy as the uniform standard to be attained. It seems to me that the surgeon should determine this point at the time of operation according to the conditions found. It should be borne in mind that a rather large proportion of our cases come to us in what is, perhaps, best designated as the terminal stage; when the disease has existed for a long time, when not only the gall bladder is badly damaged but the ducts and pancreas are much involved as well as other organs in this locality. In such circumstances the first thing for the surgeon to do is to determine how much interference the patient is likely to withstand with reasonable safety. I know of nothing more difficult nor of anything that better attests the surgeon's skill and judgment than guessing this phase with reasonable accuracy. And this is equally true in all other major conditions requiring surgery. Upon the whole I believe that it is best to remove the gall bladder when it can be done with reasonable safety. But in those cases that are very toxic or very feeble we should aim to perform the least and quickest operation that will permit the free exit of the pent up bile products, reserving for a later date the more radical operation when the patient's condition has improved sufficiently to give a fair chance of recovery.

In the argument in favor of making cholecystectomy the operation of choice, it has been assumed that the sac was the primary source of most of the pathology resulting in or from gall stones and that its removal would relieve the patient not only of his present trouble, but would insure against future trouble as well. But this assumption is only partly true. It is true, of course, that in a large majority of cases the gall bladder is the chief offender and is the dominant element in the disease process. But we must get away from the old idea that the stones and disease found in the common and hepatic ducts traveled there from the gall bladder. Duct stones and duct inflammation developed in the ducts in precisely the same manner as those found in the bladder. When the bladder has been removed the ducts be-

come more or less dilated, sometimes markedly so, apparently in an effort to assume the function of the bladder, and the probability of subsequent development of duct stones seems to be quite markedly increased.

How much more frequently cases which have had their stones removed and the bladder drained will develop future trouble as compared with those cases that have had the bladder removed is still a debatable subject, but it now seems probable that the verdict should be in favor of cholecystectomy. The better judgment that is used in fitting the procedure to the case in hand the better the results will be, both immediate and ultimate.

Closing the abdomen without drainage is another point which is much discussed and written about. It is claimed that it shortens the hospital time and lessens the density and extent of subsequent adhesions and thereby lessens the morbidity which so commonly remains after operation. Thus far I have not been able to persuade myself to adopt this method. Of course, it is thoroughly well known that in well selected cases a goodly proportion will recover without mishap, but it is really a guessing proposition and who is he who feels that he can always guess correctly? I feel sure that if one practices this method frequently that sooner or later patients will be lost that would have done well had they had suitable drainage. If but one case in a hundred be lost as a direct result of this procedure, that would be sufficient reason for not adopting it.

As to disabling adhesions; they occur principally as the result of the extensive and destructive inflammatory processes found at the time of operation and to that extent are unavoidable, or they follow immoderate handling and mauling of the neighboring viscera. If the case is well handled, proper drainage of the abdominal cavity adds but little to either the hospital time or to the subsequent morbidity and will save an occasional life that we are not justified in losing.

To summarize: First—The biliary apparatus, the stomach, duodenum and pancreas form a quartet which normally functions in close harmony. Disease of any one effects the entire group; hence the multiplicity of symptoms.

Second: The causes of biliary disease are changes in metabolism, plus infection.

Third: The maximum expression is usually in the gall bladder but all parts of the duct system are more or less involved.

Fourth: The presence of stones is a coincidence in a disease process.

Fifth: Stones found in the common or hepatic ducts are produced there and never were in the gall bladder.

Sixth: Stones produce obstruction to the outflow of biliary excretion and thereby become the dominant element in the pathology.

Seventh: The surgeon's ideal should be to reestablish the free and easy flow of the biliary products through the natural channels. But as many cases come to him in the terminal stages, many compromises must be made with the ideal.

Eighth: The procedure must be adapted to the patient's condition and kept within the range of safety.

Ninth: Cholecystectomy in suitable cases is probably better than cholecystostomy but the latter is often a life saving procedure and neither procedure insures against future morbidity.

Tenth: As no man can be invariably certain that all obstructing elements have been removed from the ducts, cholecystectomy and closure without drainage is not warranted because of the occasional death which follows and there is no sufficient advantage to compensate.

INSANITY IN GENIUS

A streak of insanity, a streak of genius and creative imagination is not harmful to the race. The danger to the race is not from a tendency to a high degree of plasticity of the highest evolutional level, but to an increase of an inborn tendency to a functional or organic regression of it, resulting in various degrees of imbecility. As the higher grade imbecile possesses the animal passions and is fertile, it follows that more than a streak of mental deficiency in a race constitutes an urgent social problem of national importance. Hitherto nearly all the efforts of the state have been toward legal detention of the mentally afflicted (under humane conditions, it is true), but little has been done in the way of prevention or cure.

ETHER IN THE TREATMENT OF THE SECONDARY PNEUMONIAS OF CHILDHOOD

By GEO. M. LYON, B. S., M. D.
Huntington, W. Va.

IN THIS STUDY the same classification of pneumonias is used as that used by Dr. Howland on the pediatric service of the Johns Hopkins Hospital. This classification is chosen because it seems to be the most satisfactory combination of the pathological and the clinical findings.

The primary pneumonias are the acute, usually 'sthenic' pneumonias of childhood, that have a sudden onset with an abrupt rise of temperature, expiratory grunt coming on early, high leucocyte count mostly polymorphnuclar, with a tendency to continuously high fever but at times with remissions of temperature from 102 to 105, and usually but not always terminating by crisis in 2 to 10 days, and characterized by a relatively low mortality said to be about 2%. These are the commonly observed lobar pneumonias of childhood. Occasionally primary pneumonias may be lobular instead of lobar in distribution, but these also have a characteristic abruptness of onset that clinically enables us to classify them as primary pneumonias with the usual treatment and prognosis of a primary pneumonia.

The secondary pneumonias are those secondary to measles, pertussis, influenza or other generalized upper respiratory tract infection. The onset is more gradual being usually an extension of the infection from the upper-respiratory tract downwards into the bronchioles and capillary bronchi. This may then extend to parynchematous consolidation in the form of grapes scattered throughout one or more lobes. This consolidation may extend further and coalesce into a lobar distribution. Significant physical signs usually do not appear in the lungs so early and the signs of a localized bronchitis may be the first auscultatory findings of any meaning. There is a great tendency for the pneumonic process to be scattered over more than one lobe, a characteristic not seen in the primary pneumonias. The temperature may be continuously high, but it is more apt to be of the irregularly fluctuating type. Early the objective appearance of the patient may not seem so grave but as the infection progresses, both objective and subjective findings become aggravated, the color becomes a mixture of yellowish pallor and toxic cyanosis, and the patient seems to have little power of resistance, although expiratory grunt and dyspnea may never be as exaggerated as in the primary type. These patients tend to be sick over a longer period of time, usually ten to thirty days and successful termination may occassionally come by crisis, but it is usually by lysis with a slow tedious convalescence. The leucocyte count tends to be generally lower than in the primary type and the anemia which is not apt to be of much significance in the primary type may be a most significant factor in the secondary type. The mortality of the cases of this group is much higher than in the other group, and is said to range from 15 to 35% depending upon the observer, the type of prevailing infections and the class and condition of patient seen.

During the spring of 1925 there occurred in and around Huntington, West Virginia, a moderately severe epidemic of pertussis, which dragged out through the summer and fall months only to be followed by one of the most severe epidemics of measles ever witnessed in this section. Many cases of the old fashioned 'black' or hemorrhagic measles were seen and the mortality of the epidemic was very high. Cases of 'measles-pneumonia' were frequent and of the type fre-

quently seen in more northern sections of the United States. During these same months there was a high incidence of 'influenzal' or other bacterial upper respiratory tract infections presenting many cases of otitis media and secondary pneumonias, and with a singular absence of acute primary pneumonias. The secondary pneumonias seen have been in all respects very much like those seen in the fall and winter of 1918 and 1919, either accompanying or following the great influenza epidemic.

The above description of classification was thought essential because of the necessity of accurately describing the kind of pneumonias considered in this report,—the term 'broncho-pneumonia' generally being used by the clinician in a sense not differentiating between those broncho-pneumonias of the acute primary type and those of the more frequent or secondary type.

All the pneumonias included in this report are taken from the second or secondary group. There have been several cases withheld as there was some doubt as to whether they were definitely of the secondary type. These were omitted in order that there might be no chance of including any of the primary type in this report. All of the doubtful cases omitted recovered quickly so that their inclusion would not have affected the work done, and while they were given the same ether treatment, the fact that there was a possible doubt as to the classification seemed sufficient to exclude them entirely.

In studying the use of ether injected intramuscularly in the treatment of pertussis we were impressed with the unusually satisfactory results obtained in those very sick patients with extensive bronchitis or broncho-pneumonia,—the ones presenting the picture of a secondary pneumonia of the 'asthenic' type so frequently seen in the third to fifth week of a pertussis infection This observation rationally suggested the trial use of ether in the secondary pneumonias not preceded by pertussis. The literature, while having an occasional reference to the use of ether in pneumonia, was singularly lacking in it. LaSalle[1], Presti-Seminerio[2], and Darnet [3], gave the most complete reports on the use of ether in pneumonias of childhood. Lyon [4], refers to the use in post pertussis pneumonias. Apparently their good results were not seriously considered in this country, as little work along this line has been done here. In an occasional article one writer or another would refer to its use. The reports were usually only brief mentions or incomplete reports. Because of the natural tendency for pneumonias of the primary type to recover and because of the ease with which any therapeutic agent might be considered effective in this type of pneumonia, we have refrained from including the primary pneumonias in this report.

Three types of secondary pneumonias were seen:

1. Post-pertussis group.
2. Post-measles group.
3. Post-influenzal group. (Included in this group were also the pneumonias apparently secondary to a generalized upper respiratory tract infection. In this group the patients invariably showed pneumococci or streptococci in the sputum or throat cultures, and in some both were found, and in some cases the staphlococcus albus or aureus).

In reporting the work done, each group is taken up separately in order to avoid the necessity of detailed and confusing case reports of mixed groups. The first or post-pertussis group was the one first studied, as this group came under the work done earlier on the use of ether intramuscularly in pertussis. In this group eighteen cases were treated. Eight of these cases were treated with ether intramuscularly, and in each case there was a striking improvement clinically by the end of forty-eight hours and there was an early termination of the pneumonic process, and a convalescence proportionately shortened. Ten of these cases were treated with ether in olive oil by rectum. Results were equally as striking as in the case treated with the ether intramuscularly. There were no deaths and yet all cases were of the kind one expects to see seriously sick for a period of two to four weeks with a slow unsatisfactory convalescence. While otitis media, purulent, was present in five cases, this complication cleared up in from ten to

twenty days satisfactorily. There were no other complications met with.

In the post measles group, twenty cases were treated and all were in the stage of secondary pneumonia when first seen. All were treated with ether by rectum, but the first three, who were treated instamuscularly. There seems to be little, if any, difference in efficacy between the two methods. There was a return to normal temperature by all cases in five days, in ten in three days and in seven in two days. Clinical improvement was seen in all cases in three days, and in two cases in twenty-four hours. It is to be understood that these patients were not merely suffering from a mild post-measles bronchitis. They all showed the typical picture of a profound toxemia and in this group in particular the auscultatory findings were quite typical of a scattered secondary or broncho-pneumonia. Otitis media as a complication was frequently seen, but in each case was being well cared for and did not obscure our study. No empyema or pericarditis occurred in the series. There was one death in a patient dehydrated with bacillary dysentery. Four members of his family, without measles, also had bacillary dysentery.

In the post-influenzal group, which includes those secondary to influenza and other influenza-like upper respiratory tract infections, there were fourteen cases. Six cases were treated intramuscularly and eight by rectum. Recoveries in this group were the same as those in the other groups. Three patients had normal temperatures within forty-eight hours, and all within four days. In this group six cases were checked with roentgen-ray plates of their chests because it was thought there might be a possibility of it being a primary pneumonia. In each case the findings were not those of a primary pneumonia, but rather of a secondary or broncho-pneumonia. In order to remove as much as possible of the personal factor in diagnosis, practically all cases have been seen by other physicians than the writer. To this group also may be added six cases treated by other physicians in other towns under the direction of the writer.

To give more concretely the results seen in these cases, the history of one case of the post-influenzal type is briefly summarized. P. B. Age 4 yrs., April, 1925. Influenza with leucopenia last week in March. He did not recover well from this and went steadily into a secondary or broncho-pneumonia. Consultation was requested and the following were the findings when first seen by the writer. He had been sick for three weeks and had had fever irregularly high from 100 to 105 for the past two weeks. He was quite asthenic and toxic. Leucocyte count had risen to 25,000 during the second week, with 45% polymorphs and 50% mononuclears. During the third week it had fallen to 14,000 with 34% polymorphs and 60% mononuclears and his red cell count was only 3,800,000 with a Sahli Hemoglobin Determination of 55%. It was on the day of this last blood examination that the writer first saw the patient. The skin was yellowish color and the general condition was unsatisfactory. There was no otitis media, throat infection, empyema or other discoverable focus of infection other than his chest. Areas of tubular breathing were scattered over both lungs, ranging in size from 3 to 6 cm and with adjacent emphysematous areas of similar size scattered throughout. Roentgen-ray findings confirmed the auscultatory findings of a widespread patchy 'broncho-pneumonia.' Tuberculin tests were negative in the strengths of both .1 and 1.0 mg (NYBH Tbcln.) The temperature was 103 by rectum. The patient was quite ill, and his physician said he was losing ground daily. He was given 1 cc of Ether (Squibb) into the gluteal muscles twice the first day and three times each of the succeeding two days. In twenty-four hours the sensorium had changed most remarkably and the temperature had not gone above 101.5. By the end of the second twenty-four hour period it had fallen to 100 never to rise above that during the entire convalescence. By the end of the first week he had made as much progress as similar patients under previous methods of treatment would have made in two to three weeks. His return to normal vigor was almost complete by the end of the second week. This patient was seen by four physicians who concurred in findings and sub-

sequent impressions. This history is given because it was the first one so treated by us and we were impressed by the dramatic result. Furthermore it is given because practically all other cases have acted in a manner quite like this case.

DISCUSSION OF CASES

In all there were treated and observed eighteen cases of post-pertussis pneumonia; twenty cases of post-measles pneumonia, and twenty cases of post influenzal pneumonia, or a total of fifty-eight cases of secondary pneumonia with only one death, and that a post-measles pneumonia complicated with a very severe bacillary dysentery. The cases were taken from all conditions of life and were distributed in about as representative a manner as possible. About one-third came from well-to-do private practice; one-third from the average middle class home and about one-third from actual charity or 'dispensary' type of home. In this manner the advantages of good surroundings have been balanced by those of poor surroundings and it can not be said that the low mortality is due to the fact that all are taken from a well-to-do private practice. The oldest patient was 5 years old and the youngest 6 months. There were thirty-one boys and twenty-seven girls. The average age was between twenty and twenty-two months. There was one death. No serious complications or sequelae developed after ether treatment was begun. During convalescence none of the cases presented the stubborn, dry hacking post-pertussis or postmeasles cough so commonly seen after pertussis and measles whether accompanied by pneumonia or not. All roentgen-rays taken after the pneumonias cleared up showed enlarged mediastinal and hilus glands usually seen following these conditions. A remarkable thing found in the majority of the cases was a shorter, more satisfactory type of convalescence than one generally sees in such cases.

Between the years 1921 and 1925 the writer observed forty-three cases of secondary pneumonia taken from the same classes of patients. There were nine deaths, with a mortality of 21%, and they were all treated in the manner as is usually advised in any of the better pediatric clinics of the present day. Fluids were pushed, whatever symptomatic medication seemed needed was given, mustard plasters in proper cases were used, but on the whole sedatives and codeine were relied upon as the main factors in conserving the patient's strength. Unnecessary or doubtful medicines and treatments were not given, although two cases were treated with gentian violet intravenously and three with mercurochrome intravenously. A mortality of 21% was found among these cases and that is pretty close to the average for similar cases similarly treated before the use of ether. In these cases there was a characteristic tendency for the case to drag out, to have frequent complications, and to have an unsatisfactory convalescence. They were characterized particularly by a high mortality. The commónest complications were otitis media, empyema, chronic pneumonia and tuberculosis. In this series of forty-three cases there was one epidemic of measles and one epidemic of pertussis only and both were mild compared to the epidemics included in the fifty-eight cases reported as treated with ether.

TREATMENT

One ounce of ether was added to five to seven ounces of olive oil. This was mixed by the pharmacist and the parents instructed as to how to give it with a small rubber infant's ear syringe by rectum. The child was placed face down and the buttocks firmly held together after the oily menstrum was injected. In most cases it was well retained, especially if the patient were really quite ill. One-half to one tablespoonful was given at a time, and given as often as every four hours if the patient was quite restless or quite ill. Larger children, of course, required more, but a small infant of 18 pounds can safely take one-half tablespoonful of the above proportion every 4 to 6 hours. After the third day the treatments were given only twice or three times in the twenty-four hours. Treatments were continued in most cases twice daily for the first week and then stopped.

Other routine procedures were to force water and orangeade to which a little cane sugar had been added. The diet was limited to a putrefactive rather than fermentative diet wherever possible. Codein suphate by mouth to aid in control of cough or pain and sodium luminal to control restlessness were used where necessary. Liquid petrolatum nasal drops to which had been added a small amount of coryfin were used almost hourly in copious amounts. Benzoin steam kettles were arranged in the room two or three times in the twenty-four hours. In no case were mustard plasters, diathermy, intravenous dyes or digitalis used, primarily because the patients did so well it was not necessary to look further for therapeutic help.

SUMMARY

Fifty-eight cases of secondary pneumonia in childhood have been treated with ether, either intramuscularly or in olive oil by rectum. Every effort has been made to have the diagnosis or classification correct in each case included. The results have been constantly satisfactory and at times approaching the efficacy of a true specific. By comparison with a similar group seen previously, there has been a great improvement in results obtained,—namely, earlier termination of the infection, shorter and more satisfactory convalescence and a decrease in incidence of both complications and deaths. It is felt that this series is large enough and that it has been studied carefully enough to be able to recommend the use of ether in olive oil by rectum in all cases of secondary pneumonia in childhood. It was in all cases harmless and has seemed to act as a most satisfactory therapeutic agent in the series here reported.

CONCLUSIONS

Ether in olive oil by rectum is of decided value in the management of secondary or broncho-pneumonias of childhood, particularly those following pertussis, measles, influenza and influenza-like infections. It is simple to give and it is safe to use.

BIBLIOGRAPHY

[1] LaSalle, M.: Ether treatment of pneumonia in children. Arch. de med. d. enf. 23:414, July '20.

[2] Presti-Seminerio, F. L.: Ether in pneumonia and bronchitis in children, Pediatria 31: 206-217, Feb. 15, 1923.

[3] Darnet, J. J.: Injections of ether in pneumonia in children. Semena med. 1: 44-46, Jan. 1. '25.

[4] Lyon, G. M.: Ether intramuscularly in treatment of Pertussis, West Virginia State Medical Journal, October, 1925.

THE PATHOLOGY AND TREATMENT OF CHRONIC ARTHRITIS *

By RALPH PEMBERTON, M. D.
Philadelphia, Pa.

MR. CHAIRMAN, and members of the Association: It is with a great deal of pleasure that I am here with you today, not only because it is always a privilege to have the opportunity of addressing an audience such as this upon topics in which one has long been interested, but also because I have made a great many agreeable contacts with the profession in this part of the state which I am glad to be able to renew.

I have been asked to talk to you upon the subject of Arthritis and it will be my purpose to run very briefly over the pathology as we see it in Philadelphia and then to discuss the question based upon that pathology.

I do not know whether you realize that arthritis is the oldest disease entity of which we have any record. It was frequent among the reptiles of the cretaceous period and there are many examples of spondylitis among the fossil remains of dinosaurs. It

* Read before the fifty-eighth annual meeting of the West Virginia Medical Association at Bluefield, June 9, 1925.

LIBRARY OF THE PHYSICIANS

was also the cause of much suffering to prehistoric man and today constitutes one of the great scourges of society. During the war there was an incidence in an army the size of ours, at the close of the war, of 60,000 cases of chronic arthritis a year. Prior to the war the Committee for the Study of Special Diseases with headquarters at Cambridge, England, selected arthritis as the topic most needing intensive study and a large effort to this end was under way when the war broke out.

It is gratifying to learn that in this country arthritis is receiving progressively more of the attention which it deserves and every few months I learn of the establishment of a new clinic in some medical center for the intensive study and treatment of the disease.

My remarks today will be based upon a critical consideration of about 1200 cases of arthritis in toto. The subject of arthritis belongs within the realm of internal medicine but as an internist I must confess nevertheless that in general the disease has received more profitable attention from the hands of orthopedists than from any other single group in medicine. Dentists, nose and throat specialists and other specialists have been so often called upon to treat focal infections in arthritis that the idea has gained ground in some circles that the disease can be successfully treated from the viewpoint of the specialities, but, as I hope to be able to show you, this conception is far from adequate and constitutes part of the cause of the failure so frequently encountered.

The classifications of arthritis have been many, but the simplest and in many ways the best is that of Nichols and Richardson based upon an exhaustive microscopic and macroscopic study of the morbid anatomy. They divide arthritis into two chief types, the proliferative and the degenerative, sometimes improperly designated as the hypertrophic and atrophic, and it is possible to include all forms of arthritis under these heads. Charcot's Joint for example, is a variety of the degenerative type.

It is important and necessary to differentiate sharply between acute arthritis in the form of so-called inflammatory rheumatism and chronic arthritis because these two conditions represent distinct clinical entities. However, they also have much in common and I am prepared to believe that they differ more in degree than in kind. The acute variety is of course characterized by fever, leucocytosis, often bacteremia and endocarditis but these phenomena represent the full development of bacteriologic infection as contrasted with the smaller influences of localized foci. Moreover, the actual phenomena within the joints and muscles are often much alike and apparently depend largely upon the same basal physiologic disturbance for their occurrence. In the study of arthritis during the war, cases were observed to pass from the chronic to the acute form and back again.

During the war I had the privilege of directing the intensive study and treatment of arthritis for the army and we made a very exhaustive study of 400 cases among soldiers from the combined clinical and laboratory standpoint. Arch Int Med: 25:231. March, 1920. Pemberton et al. On analyzing the etiologic factors in the histories of these men it was of much interest to find that exposure played the precipitating role in sixty percent of cases. In this connection I want to emphasize the fact that nothing in my remarks is to be construed as minimizing the accepted importance of focal infection in the production of arthritis and other diseases. I believe as firmly as anyone here in the existence of this relationship but it is also of great importance to determine the limitations to the application of the so-called doctrine of focal infection and to determine, furthermore, how it acts.

Seventy-three percent of these soldiers had demonstrable surgical foci of which fifty-two percent were in the tonsils; thirty-three percent were dental in nature, and twelve percent were in the G. U. tract. In a series of seven hundred cases studied in civil life with the help of my associate Dr. E. G. Peirce, the incidence of tonsillar and dental infection is reversed, however, the teeth playing the leading role. A matter of great importance in the statistics based upon the army cases is the fact that forty-six percent recovered in the presence of demonstrable foci whereas

only sixteen percent recovered after the removal of foci. The significance of this observation is that factors other than the mere local infection play a large role and may alone determine invalidism or recovery. The relative youth of these army cases must be given large significance but the principal involved cannot be denied.

We studied the metabolism of these subjects from a number of angles and found that the basal metabolism was slightly lowered in about twenty percent of the cases. The urea and non-protein nitrogen of the blood were normal in all uncomplicated cases and on many grounds it can be stated with confidence that there is no justification for the age long period of denying these individuals the so-called red meats. The anemia incidental to arthritis is often aggravated by this faulty practice. However, the ingestion if meat is nevertheless to be considered, together with other food stuffs, in a connection later to be mentioned. On studying the carbohydrate metabolism it was found that sixty percent of the cases showed a definitely lowered sugar tolerance and this has been corroborated since by many other observers. This lowered tolerance is by no means specific for arthritis but it parallels arthritis and focal infection more closely than it does any other disease except diabetes and possibly certain thyroid disturbances. Thus, in a boy of nineteen with a bad arthritis of the hip of six months' duration there was a lowered sugar tolerance of almost diabetic severity. Two weeks later, diseased tonsils were removed and two weeks after the operation the arthritis had disappeared and the sugar tolerance had returned to normal. This experience was repeated in many cases and it was furthermore shown that the lowered sugar tolerance returned to or towards normal contemporaneously with recovery from the arthritis irrespective of the means of therapy accomplishing this. Thus, in cases which recovered after the use of non-specific protein or the application of a reduced caloric intake the sugar tolerance returned to normal although not so abruptly. It was clear, therefore, that the form of lowered sugar tolerance hereunder discussed is a function of focal infection on the one hand, and of arthritis on the other.

On a good many counts, which I won't take your time to go into, there has been reason to believe that there is some disturbance in the blood flow in arthritis especially in the finer circulation. Upon applying this thought to the carbohydrate metabolism and studying the blood gases during the conduction of a test revealing a lowered sugar tolerance, it was observed that the majority of arthritics showing this lowered tolerance also showed an increase of the percentage oxygen saturation in the same blood. In other words, not only was there failure of removal of the sugar but the oxygen of the blood was inadequately utilized at the same time. There was also observed between arthritics and normals a small difference in the percentage oxygen saturation of the fasting blood which will not bear great emphasis but is a change in the same direction. Repeated attempts to explain the rise in the percentage saturation of oxygen on the basis of changes in the chemical composition of the blood proved unavailing but it seemed possible to account for this rise on a purely mechanical basis. In a study of the effects of external heat upon the human body by Cajori, Crouter and Pemberton it was found that the peripheral blood under these circumstances undergoes a rise in the axygen percentage saturation. This rise is undoubtedly due to the increased rate of circulation by virtue of which the blood passes the tissues so rapidly that inadequate utilization of the oxygen takes place. Thus it was conceivable that the blood circulated too rapidly in arthritis or that it failed to reach all of the tissues, thus leaving some of its constituents unutilized. This hypothesis was put to experimental test as will be noted shortly.

In a further study of the pathology of arthritis we turned our attention to a study of some of those measures which favorably influence the disease. Prominent among these are exercise, external heat and massage. Brief reference to this study will help to elucidate the dynamic pathology concerned in arthritis. Every arthritic learns sooner or later that a stiff joint is more or less

benefitted by exercise. The period of greatest disability is the early morning and as the day bears on the disability grows less so that these individuals often adopt the expedient, especially in the early stages, of voluntarily giving local exercise to the involved part or taking general systemic exercise or both. The effects of exercise have been shown by Barr and his associates, in this country, and by Haldane and his co-workers in England to be characterized by the production of an acidosis due to the lactic acid formed. Evidences of this systemic acidosis may persist for an hour after the cessation of moderate exercise.

Comparable studies were conducted by the writer and his associates upon the influence of external heat which is notoriously comforting and often of lasting value to the arthritic. It was found that during an electric "bake" the body loses carbon dioxide through the lungs because of a heightened respiration; through the urine, and through the sweat, which is elaborated in large amounts. This loss of acid from the body leaves behind a relative excess of alkali in the blood which becomes more alkaline and, in excessive cases this situation leads to alkalosis and tetany. In the effort to compensate for this disturbance of the acid base equilibrium of the body the excess of alkali is excreted through the urine and sweat which latter secretion invariable becomes more alkaline as the exposure to heat continues, even though neutral or acid at the start. It is of interest to note in passing that this alkalosis seems to explain at least part of the benefit of the sweating process in those cases of nephritis accompanied by acidosis.

These two measures, exercise and the application of external heat, have therefore very opposite effects on the human body although their favorite influence upon arthritis under proper circumstances is undoubted. It became interesting therefore to ascertain what the effect of massage might be in order to determine if possible the common denominator operative between these three measures. One would suppose on a priori grounds that massage would bear a close analogy to exercise as regards its physiologic influence; but on studying the blood and metabolism in the manner applied to exercise and heat it was found that none of the changes above described took place. In other words massage, even of vigorous nature is accompanied by neither the acidosis of exercise nor the alkalosis of exposure to heat. Some changes do take place, however, and these have to do with the increase in the blood count to which attention was first called as long ago as the '80's by J. K. Mitchell. This influence is very real and is adequate to contribute importantly to convalescence from anemia. It is a matter of common knowledge that the circulation is greatly accelerated by exercise. It is also accelerated during exposure to heat as mentioned earlier in this text. In short, to avoid unnecessary detail, the common denominator operative between exercise, massage and external heat, in the production of the beneficial consequences, is chiefly to be found in their influence upon the circulation in respect to the opening up of capillaries and the liberation and circulation of stagnated red cells.

In a considerable proportion of arthritic patients, particularly of the "proliferative" type, the application of a restricted caloric diet is of benefit. In view of the suggestions, offered above, of a possibly increased rate of circulation in arthritis, the hypothesis was advanced that absorption from the gastrointestinal tract might in consequence be unduly rapid. The benefits of a reduced diet would then be referable to the avoidance of an undue, or unduly rapid absorption, and the occurrence of a low sugar tolerance would be referable to too rapid absorption. This hypothesis was tested by feeding urea and potassium iodid, coincidentally with the sugar, to arthritic patients with normal and lowered sugar tolerance. The nonprotein nitrogen of the blood and the urinary iodid and nitrogen did not change commensurately with the blood sugar, however. The results gave no support to the theory of an increased rate of absorption in arthritis and left, as one alternative, the theory that the blood inadequately reached some tissues. This failure to reach all tissues might result from closed capillary beds, and would, equally, leave some of the blood constituents unutilized.

It was therefore determined as an experimentum crucis to carry out experiments in which the effort would be made to interfere with the circulation of the blood in several limbs with the aim of seeing whether this denial of blood to the tissues would lead to a lowered sugar tolerance such as occurs in arthritis. Choosing arthritics who had always had, or had acquired, a normal sugar tolerance and utilizing normal persons also, experiments were carried out in which the sugar tolerance was tested before and after the assumption of a recumbent posture with two legs and one arm elevated at right angles to the body. The blood flow to three limbs was thus greatly interfered with. It was of much interest to note that under these circumstances 50 percent of the subjects studied showed a definitely lowered sugar tolerance of non-diabetic nature; the kind met with in arthritis.

Considerable space has been given to the detailing of these experiments because the great difficulty in the treatment of arthritis heretofore has been due to the paucity of data reflecting the pathology concerned. The evidence from these experiments approaches proof that at least part of the pathology productive of the actual symptoms in the rheumatoid syndrome is due to an interference with the blood flow probably in the finer channels and capillary beds. If this conclusion be correlated with the benefits from measures which confessedly improve circulation, the evidence becomes even stronger.

There are other points of interest bearing upon the pathology of arthritis of which time prevents mention. Suffice it to state that observations of Dr. Cajori, Mip Crouter and myself during the past year have shown that the intestinal tract is in a hitherto unsuspectedly close relationship with the joint fluids. Ingested glucose enters the joint fluid almost immediately and it is almost certain that this is true of many products of intestinal activity. It is thus shown on the one hand, and for the first time, that the avascular articular cartilage derives much of its nutrition from this source and on the other hand that the way is open for the entrance into the joint of an excess of normal constituents and also deleterious substances from the alimentary canal.

It may be well to call attention here also to the fact that the age period of greatest incidence of arthritis, around 45 years, corresponds with that at which the age curve of metabolism declines; namely, that at which the metabolism grows less intense. This is just the opposite of diabetes which grows more intense at this age for the same reason. It is of much interest to note that the combination of severe types of true diabetes, and severe types of arthritis or rheumatism is practically unknown and it appears that under conditions which prevent access of carbohydrate to the tissues much or all of the mechanism for the production of rheumatism phenomena is lacking. This statement is not to be confused with the experiments described above which have to do with a lowered sugar tolerance of non-diabetic nature. The mechanism of this non-diabetic sugar intolerance is discussed at length elsewhere, J.A.M.A. Dec. 5, 1925. Vol. 85: No. 23, p. 1793. Pemberton, Cajori and Crouter.

The cursory outline of some of the outstanding factors in the pathology of arthritis brings us to the question of treatment. I think there can be small necessity of taking your time for a discussion of the role of focal infection in arthritis. This has been emphasized so exhaustively and successfully that we are probably all agreed as to the importance of studying all cases of arthritis in this regard and removing the discoverable foci when practicable. It is important to realize, however, that the mere removal of focal infection, however causative of the disease, will not necessarily cure the arthritis. Even after removal of causative foci there may long remain a more or less permanent dislocation of physiology adequate to perpetuate symptoms. Failure to appreciate this truth is the cause of widespread invalidism. This dislocation of physiology is further aggravated by the secondary consequences of the disease such as inactivity, atrophy of muscle, sluggish local and general metabolism, determination of blood to dependent parts, torpor of the intestinal tract, etc.

In general the measures which are of most avail in arthritis bring about a betterment of the circulation or an increased local or systemic metabolism, or both. It is even possible that the betterment to the metabolism is dependent upon improvements in the circulation. The beneficial measures are chiefly exercise, massage, external heat, as already mentioned, arsenic, radium, thyroid in suitable cases; the x-ray; and potassium iodide. The influence of radium towards heightening metabolism is generally accepted and its value to arthritis when properly carried out is very real. Arsenic is one of the most valuable agents at our command in the treatment of arthritis. It has a direct influence upon the regeneration of blood. In conditions complicated by anemia the benefits from its use are sometimes little short of specific. Several years ago the writer pointed out that after exposure of the arthritic to the x-ray for photographic purposes the systemic benefit was sometimes very apparent and this agent is now being used therapeutically, particularly in Europe, in the exposure of single joints to it at considerable intervals.

The sympathetic system is involved in the arthritic syndrome and it not infrequently happens that patients who are about to undergo an operation, and are fearful of it, experience a great subjective improvement. Various psychic stimuli, including grief, may have this influence as does the operation itself in many cases. The explanation of the value of non-specific protein is often to be found on the same premises. Women with arthritis who undergo gestation often experience marked betterment, probably because of the increased metabolism of pregnancy which may rise to 30 percent above normal; but after delivery they are very apt to relapse.

This "whipping up" of metabolism however, must not be at the expense of the general "reserve" of the patient. We depend, at last analysis, upon the response within the tissues themselves and if the individual be fatigued this response will not be forthcoming; any more than it would be in an athlete trying to "train" or develop more speed when already tired. Systemic rest is therefore a matter of prime importance, not only when vigorous or exhaustive measures are being carried out but throughout the whole course of treatment. Two periods of one and one-half hours, in the middle of the morning and the middle of the afternoon, devoted to lying flat in dorsal decubitus, will help nearly all arthritics not already bed ridden.

One of the most important contributions made to the treatment of arthritis has been through the activities of the Boston School of Orthopedists, particularly Goldthwaite, Osgood and their collaborators who have drawn attention to the baneful influence of the physical handicaps which the arthritic sooner or later acquires or may even have had from the start. By means of postural exercise, deep breathing, abdominal massage and the like, it is possible to influence very profoundly the disturbed and sluggish physiology and even the underlying anatomical factors bringing it about.

The use of vaccines need not be touched on here as it is common knowledge and is directed solely at enabling the individual to improve his resistence towards a given infection. The use of non-specific protein injections has a wider field of application in that in addition to the value of a vaccine, in some cases, there may also be a benefit from "protein shock" which is generally followed by fever and therefore an increased metabolism. Allergy probably enters into some of the results achieved. The chief field for such therapy is in the acute and subacute cases. Tonic medication in general is always to be considered as an adjuvant in carrying out any of the specific measures under discussion.

The profession has long appreciated that the intestinal tract may serve as a focus of infection either through foci, as such, in the gall bladder or appendix, which then need their appropriate treatment, or through the ill defined toxines which are known to be elaborated there. Colonic massage and colonic irrigation are measures which avail in helping to meet toxemia secondary to intestinal stasis although these measures are now being exploited in certain communities to an undue degree. In connection with mal function of the intestinal tract, however, it is important to bear in mind that measures di-

rected towards improving its eliminating function resembles the labor of Hercules in the Augean stable and do not treat the difficulty at its source. For some years the writer has been interested in the undoubted benefits to be derived by acting upon this principle and curtailing the labors given the intestinal tract to perform. In other words, the food intake is a matter of prime importance and if it be important to increase elimination, it is, often, equally or more important to decrease the food intake. Furthermore, in view of the benefit from measures which expedite metabolism it is obviously important also to place a lessened burden upon such a handicapped metabolism and when the "load" is removed, betterment may be obvious within several days both subjectively and objectively. In short, a lowered caloric intake may alone be the cause of recovery from arthritis in many cases, especially those of the proliferative type. Thus, in an officer who had an arthritis of wide distribution and of several months' duration the only focal infection found was in one tooth which was removed. Several months later he had made no improvement and upon studying the food intake it was found that he was ingesting a total of about 3500 calories although confined to bed. He was then placed upon a ration yielding 2000 calories, the larger part of which came from fat and within four days he was able to walk without crutches. He eventually made a complete recovery along these lines. Many such instances could be cited but it is important to emphasize the fact that such sharp curtailment of food must be carried out with great caution or not at all in those who are suffering from inanition, anemia or depletion from any cause. Even so, the betterment may be striking but the problem of the nutritional necessities must be very critically weighed. A fair working rule for well nourished persons who are sedentary and large eaters is to place them upon their theoretical nutritional requirement of 30 calories per kgm of body weight. In the obese, however, these figures may be much too high. With persons living on 1800 calories or thereabouts, having small appetites, a further curtailment must be conducted under controlled conditions only. In many cases in which a low caloric diet results in a limited improvement only, further betterment can be achieved by combining this with other measures such as hydrotherapy, arsenic, massage and the like. One of the outstanding considerations in arthritis is appreciation of the fact that a combination of measures may succeed when any one of these measures alone would fail. There is no panacea for arthritis and those who pin their faith to a single measure evidence thereby a failure to understand the problem as a whole.

Finally, I want in this very brief survey to call your attention to the fact that arthritis is only one branch of a very large tree and constitutes merely the expression on the surface of an underlying pathology. Charcot long ago called attention to this fact in his Salpetriere lectures. Erythema, psoriasis, nervous manifestations, some insanities, neuritis, myositis and iritis are complications constituting other branches of the tree. The arthritic or rheumatoid syndrome should be regarded as a sort of equation, on one side of which much can be done to improve the disturbed metabolism and on the other side of which, much can be done to lessen the burden upon this disturbed metabolism.

Let me urge upon you to do what you can to prevent deformity. Nearly every case of arthritis which is gnarled up is a reproach to the medical profession. We cannot prevent all deformities but we can prevent most of them. Do not hesitate to get assistance for difficult or complicated cases. Arthritis impinges on more fields of medicine than does any other disease and no practitioner, however well informed, can possibly hope to cover them all. A long experience with the disease convinces me that, by and large, there are few conditions for which more can be done and the outlook for the arthritic who is treated vigorously and above all intelligently is growing progressively better.

THE COMBINED USE OF GLUCOSE AND INSULIN IN SURGERY *

By ROBERT KING BUFORD, M. D., F. A. C. S.
Charleston, W. Va.

MOST of the energy necessary for the continuance of the varied functions of the body in health or disease is derived from the oxidation of glucose. The minimal daily requirement of the body at rest is the equivalent of 6 to 8 gm. of glucose for each kilogram of body weight. Additional amounts of glucose are required for the performance of work or for the storage of reserve supplies of glycogen and fat. If this amount of material is not provided the body obtains it at the expense of the stores in the tissues. For this reason some of the beneficial effects of glucose may be due to its value as a food. Glucose alters the nature of metabolism, the respiratory quotient being increased toward unity, which indicates a greater utilization of carbohydrate in the body and a lessened destruction of protein and fat. This change in the metabolism of the cells of the body may have an important relationship to their reaction against disease. The saving of protein by this increased utilization of glucose allows less tissue destruction and more tissue repair, and there are less nitrogenous waste products formed so that the kidney is spared the effort necessary for their excretion.

The oxidation of fatty acids in the body depends on the simultaneous oxidation of glucose, and insufficient oxidation of glucose results in the accumulation of fatty acid residues and acetone bodies with resultant acidosis. This results not only in cases of diabetes when the oxidation is deficient, but in normal persons from fasting when insufficient amounts of glucose are present. The administration of glucose reduces acidosis by allowing complete oxidation of fatty acids, and for this reason the alkaline reserve of the body is increased. In the same manner other toxic material is probably rendered harmless in the body by oxidation to less toxic forms or by complete oxidation to carbon dioxid and water. While oxidations of this nature may not be directly connected with the oxidation of glucose, nevertheless the presence of large stores of glucose greatly inhibit the toxic action of substances like chloroform and phosphorus. Many toxic substances, such as phenols cresols, salicylates, and camphor, are detoxified by direct combination with glucose to form glycuronates which are much less toxic and can by excreted in this form, causing little damage to the body tissues.

Glucose is also valuable as a diuretic and in this way can be of great value in aiding the excretion of toxic materials from the body. Its diuretic action is due to its affinity for water which enables it to carry water through the kidney; and this action is exerted on all the tissues of the body. The fluid excreted is thus withdrawn from all the tissues and is later replaced when more water is available. Besides the stimulation of excretion of urine, other vital processes may be stimulated by this exchange of water and alteration of the concentration of the many chemical substances within the cell. As evidence of this stimulation is the apparent increase in the production or liberation of insulin following the administration of glucose, since the sugar content of the blood decreases below its former level soon after the excess glucose is disposed of, and since a second injection of glucose at this time disappears more rapidly from the blood than did the first. The alteration of the character of the metabolism following glucose administration is further proof of the changed reaction of the body cells.

In 1885, Gaule, a Swiss surgeon, was prob-

* Read before Kanawha Medical Society, at Charleston, West Virginia, June, 1925.

ably the first to substitute glucose for sodium chloride in hypidermoclysis.

Friedrich and Lennander used glucose subcutaneously in 1905. In 1911, Krusch recommended glucose for both intravenous infusions and hypodermoclysis. Kuhn in 1911-17 in addition to using glucose subcutaneously and intravenously, also gave intraperitoneal infusions. Publication of these surgeons showed the superiority of glucose over sodium chloride in its diuretic, stimulative, nutritive, and anti-thrombotic properties. Dutmann of Popper's Clinic, Giessen, after very painstaking comparative studies of salt and glucose solutions (he states that glucose 4.15% is isotonic to the tissues and blood as a 0.9% salt solution) concludes that the prolonged or copious administration of salt is dangerous or at least disadvantageous in starving or fasting subjects, not only because it leads to sodium chloride retention in the tissues thereby favoring oedema and because of the degenerating effect upon the heart muscle and kidneys, but is also undesirable because it does not relieve the acidosis which is the invariable accompaniment of starvation.

The chief superiority in glucose over salt lies in its nutritive food value. If we roughly estimate that 5% glucose is equal to 50 gms. of glucose to the liter, then four liters or 4000cc. of the solution administered intravenously in 24 hours will amount to 200 gms. of glucose (about 7 oz.) in the 24 hours. When estimated in calories (one gm. of glucose equals 3.75 calories—Sherman.) 1000cc. of a 5% solution of glucose will equal 187.50 calories and if four liters were administered in 24 hours, then 750 calories would be consumed per day.

Experiments have shown that sugar quickly disappears from blood and causes an appreciable stimulation and increase in metabolic rate, as shown in the great excretion of phosphates and urates in the urine. The body utilizes it without residue and when introduced in isotonic solution causes no glycosuria.

Our observations have shown that infusions for diuretic purposes, varying from 5 to 30% may be followed by serious metabolic disturbances and toxic symptoms which we have been able to eliminate by the addition of insulin.

Glucose is especially indicated in those patients suffering from renal or cardiopulmonary lesions in whom salt retention is most dangerous. 5% glucose solution is isotonic, and is especially indicated when an artificial serum for blood replacement has to be administered for long periods of time. Where fluid and food are needed by fasting, shock and exhausted subjects, glucose has given better results than the saline solution.

My first experience with the combined use of glucose and insulin was in a case of acute pancreatitis, and the results were so striking that we began to use it more frequently in certain post-operative emergencies. The glucose solution is made from triple distilled water and 5% either dry or syrup glucose, then it is put in a sterilizer and held at 15 lbs. pressure for 20 minutes. This stock solution is capped and held ready for use at any time. The intravenous apparatus employed is that commonly used for giving salt solution. Great care should be taken not to run the solution in the vein too fast. We use a needle of a calibre, number 20 or 22. The glucose solution when used is heated from 40 to 45 degrees centigrade and one unit of insulin is added for every 2 gms. of sugar in the solution. The solution is then well shaken and poured into the intravenous outfit. The tube of the outfit is then filled carefully and the needle is inserted and connected. The solution should enter at the rate of about 1000cc. per hour.

We have used glucose and insulin in combination in over 100 cases of post-operative emergencies, all cases showing various degrees of acidosis, increased blood sugar, glycosuria, acetone and diacetic acid. Time will not permit detail case reports. The fundamental nature or cause of different types of ketosis is not known, but physiologists agree that either because of an absence of carbohydrates or because of depression of carbohydrate metabolism, the body fats and proteins split up and are incompletely oxidized giving rise to ketones as by-products. Whatever the original cause,

a vicious circle is soon established, the persistent vomiting giving arise to starvation acidosis which tends to perpetuate the condition until the circle is broken by throwing a quantity of glucose with insulin into the circulation. This furnishes the necessary metabolized carbohydrates to oxidize the ketones and so eliminate the acidosis.

We have practically discontinued the use of giving large quantities of fluids by mouth or by rectum. The absorption is questionable by either manner of administration, at times causing vomiting, gastric and intestinal distention and extention of peritonitis by increasing peristalsis. Patients suffer less pain from intravenous than from subcutaneous injections. The continuous drip of Matos is excellent when a prolonged fluid intake is necessary.

It is our custom to give glucose and insulin at intervals of six to eight hours. We were impressed with the possibility of giving glucose and insulin as a prophylactic measure with greater value then we have obtained with it as a curative agent, and so turned our attention to the use of glucose and insulin in preoperative treatment. Patients showing before operations an unduly high acidity in the urine or a low alkaline reserve in the blood are given one or more injections of glucose and insulin as a part of the preoperative treatment.

We have found the administration of glucose and insulin especially beneficial in cases of hyperthyroidism, long standing gall-bladder diseases with hepatic insufficiency and all cases showing an increase of blood sugar. The essential cause of acidosis must be treated but since this is a deficient utilization of carbohydrate in most instances all that is required is to furnish carbohydrate to the tissues and if necessary aid the mechanism in utilizing this food (insulin).

Alkalinized therapy is necessary only for the condition of non-compensative acidosis and probably this is its only indication. One group of patients presents themselves for operation after they have been vomiting for a longer or shorter period of time. These patients are usually in extremely poor condition and have either an acidosis or an alkalosis. The presence of acetone and diacetic acid in the urine usually indicates an acidosis, but these substances may be present during alkalosis. Other signs of acidosis are lowered carbon dioxid combining power of the blood plasma, diminished tension of the carbon dioxid in the alveolar air and lower pH of the blood. The most important definite signs of alkalosis are an increased carbon dioxid combining power of the blood plasma and an increase pH value of the blood. None of these laboratory tests are difficult, but they demand an experienced and reliable laboratory worker. Alkalosis is most commonly encountered in patients with marked pyloric or intestinal obstruction and vomiting, causing a loss of hydrochloric acid or after excessive dosage with sodium bicarbonate.

Patients who have not withstood an operation well or whose post-operative condition is poor, even in the absence of an appreciable acidosis, the poor general condition improves quite rapidly following the use of glucose and insulin intravenously.

SUMMARY

Glucose and insulin are of no value in pure surgical shock, and in combating sepsis unaccompanied by any of the phenomena of acidosis, the method is of no striking value. Certainly it cannot compare in efficacy with blood transfusion. If it is an underlying condition of acidosis in post-operative emergencies, the combination of glucose and insulin offers a fair prospect of relief.

The question probably arises, why give insulin with glucose? In these post-operative emergencies, we are dealing with patients whose capacity for carbohydrate metabolism is depressed far below the normal, either as a primary factor or as a secondary result of the persistent vomiting. To flood these patients' tissues with a carbohydrate solution without providing a means of metabolizing it, would be running a grave risk of doing more harm than good, a risk which is wholly unnecessary since in insulin we have a remedy which is safe and can be used without any additional trouble, eliminating the

marked reaction following intravenous infusion of glucose alone.

We have never observed such striking results with intravenous injection of glucose alone as we have observed with the addition of insulin. Glucose given intravenously is one of the best therapeutic agents we have for suppressed urine. We feel through the cooperation of internists and laboratory workers in carefully studying patients before operation, that, many fatal cases of acidosis could be eliminated and saved by timely prophylactic intravenous infusions of glucose and insulin.

OBSERVATIONS IN EYE, EAR, NOSE AND THROAT PRACTICE*

By T. W. MOORE, M. D.
Huntington, W. Va.

CASEY WOOD once said that a woman's first ten minutes in your office often decided whether her glasses would be satisfactory or not.

This statement is my text today; in other words, the value of the impression made by the physician upon his patient in eye, ear, nose and throat practice, not commercially but scientifically, i. e. as a therapeutic adjunct.

Do you believe that surgery would ever have had the vogue it has if it had not been for the psychic effect produced by white gowned doctors and nurses, by the impression of wholesomeness made by the careful details given asepsis, could the value of hospitalization ever have been so appreciated by the public had it not been for these essentials taking hold of the lay mind?

"When a man goes of his own accord to a doctor's shop for an operation, is he not quite aware that soon and for many days afterwards he will be in a state of body which he would rather die than accept as his permanent condition of life?" I know you think that I am referring to our modern tonsillectomy, but gentlemen, the above is a direct quotation with the change of only three words from Plato's Dialogues and refers to the system of purgation then followed.

Some years ago I had for an associate a very talented woman physician—at that time, too—a patient, a well trained physician who had given much attention to psychiatry was having some nasal condition which was apparently much relieved by a douche of normal salt solution. Returning from a visit the patient stated that during my absence my associate had used a pink colored douche which he thought much more helpful. To my query as to what had been used, my associate replied that the patient had suggested that there should be something better than salt solution and that she had colored this solution with cochineal and added a couple of aromatic tablets. My associate had evidently been impressed by what some one once said that "if salt cost thirty dollars a pound and was all made in Germany, it would be one of the most valuable drugs we possess."

I recall another instance when treating some cases of atrophic rhinitis and using Dobells solution for a cleansing agent, a nervous woman was nauseated by the odor of phenol, so to conceal this I had some of the solution prepared by using cinnamon water. This did very well with this patient, but another of the same type objected to both the phenol and cinnamon and for her a solution had been made using peppermint water.

Returning from a vacation, I found an old charity patient who insisted that during my absence he had been much benefitted by using

* Read before the Section on Eye, Ear, Nose and Throat at the fifty-eighth annual session of the West Virginia State Medical Association, Bluefield, W. Va., June 11, 1925.

three kinds of spray by my office nurse. She told me that he wished her to treat him and that not knowing what to do she had used the three differently flavored Dobells solution. Parenthetically I might add that in the above I departed from a dictum of my preceptor which was that a doctor should never administer to a patient a drug which the patient thought that he could not take, and this regardless of what the physician's convictions might be.

We have all observed the relief of pain by hypodermics of aqua distillata and wondered why. I recall a dear old lady who had a tic for which numerous analgesics had been administered. She came under my observation in the hospital where her paroxysms of pain would come at about 4 P. M. daily. They were so intense that she would scream from her suffering. One day I suggested a hypodermic of distilled water and within thirty minutes after its administration she was asleep. We gave no other medication save rest in bed and hospital diet and in not a single instance did we fail to relieve her during the ten days she was with us; at this time her worry over acquiring the morphine habit had become so great that she left us and later in an Eastern hospital the Gasserian ganglion was removed, which was followed by an ulcer of the cornea and loss of vision of one eye.

I have taken you on this excursion into the realms of suggestion to show that it is an important factor even in our field where scientific lines are probably more taut than in the other domains of our science and to remind you that even with us this field cannot be ignored. In this age when the various cults have such a hold upon the lay mind, and when we are so prone to make a diagnosis from our instruments of precision in our offices and laboratories we must consider the patient's whims and idiosyncrasies and often humor them and only so doing can we teach him that the educated doctor of today leaves college with a greater knowledge of the power of suggestion than the Eddyite and more familiarity with practical massage than the osteopath.

In order to do this it is not necessary "to in any way sacrifice your love of truth, your love of learning or above all a proper estimate of the personal character of the physician."

But we will always have people of the type given in the description of Herodicus "who was himself of a sickly constitution. Who by a combination of training and doctoring found out a way of torturing firstly and chiefly himself, and secondly the rest of the world. He did this by the invention of lingering death; for he had a mortal disease which he perpetually tended, and as recovery was out of the question, he passed his entire life as a valetudinarian; he could do nothing but attend upon himself, and he was in constant torment whenever he departed in anything from his usual regimen, and so dying hard, by the help of science he struggled on to old age. A rare reward of his skill." So long as this type exists cults will flourish and suggestion cannot be ignored; and there will be those who after a brief course in some queer form of healing can acquire a license and then advertise themselves as competent to treat any and all of humanity's physical or mental ills, and pose as representatives of a new school of medicine. As a matter of fact, there are no schools of medicine; a man is a doctor or he isn't. If he is, he can and does use every method of treatment found by him to be efficacious, and nothing can or does prevent him from utilizing whatever is of demonstrated or demonstrable merit in the system of any of the irregular cults, and never does he claim that by any single procedure or remedy he can cure all diseases. Whoever makes that claim is a quack.

Last month in Atlantic City a paper before the ophthalmic section of the A. M. A. brought out the following quotations from the secretary of a Western association of optometry: "The time has come when we feel that the fitting of glasses belongs exclusively to the optometrists." I can see the look of "holy horror" with which the oculist would view this remark. Mind you, I don't say they are not qualified; at least some of them are anyway; but the fact remains that they do not qualify by passing an examina-

tion or coming before any board. We claim that the optometrists should do the glass fitting. I also claim that when there are any symptoms of any diseased condition whatsoever, the case should be turned over to the medical man at once. We do not want to throw bricks at any one; but fitting glasses belongs exclusively to the optometrists, and we propose to get what belongs to us.

Another enterprising optometrist of Wisconsin, distributes handbills with the caption "Optometry Straightened Crossed Eyes Twenty Years Ago." This is followed by two views of a rather good looking woman with a very marked convergent strabismus without her glasses, the eyes straight with the glasses on. Beneath, "these pictures are shown you to explain what is meant by Optometry," then follows the slogan: "Optometry belongs to the Optometrist. Dentistry belongs to the Dentist. Law belongs to the Lawyers. Medicine belongs to the Physician." Shades of Helmholtz and Donders protect us!

Dr. Patton who wrote the paper, goes on to say that, "From the foregoing it is evident that there is a definite unrest on the part of a widely spread group of optometric leaders who are determined to secure for optometry the sole legal right to fit glasses. If the occulist will pass their board, all well and good. Of course, you say this can never be accomplished, perhaps not; but we all know how easy it is for such legislation to slip through and how difficult it is to repeal it if it is once enacted."

MEDICAL TREATMENT OF INFLAMMATION OF THE NASAL ACCESSORY SINUSES *

By J. E. McKENZIE, M. D.
Beckley, West Virginia.

THE maxillary sinus is present in the new-born in but a very rudimentary form. Its permanent shape and normal position are not obtained until after the eruption of the permanent teeth. It therefore reaches its full development between the fifteenth and eighteenth years. The frontal sinus is not present in the new-born, but makes its first appearance about the second year, and about the eighth year this sinus may be recognized as a distinct separate cavity above the root of the nose interal to the supra-orbital ridge. The ethmoid and sphenoid sinuses are present at birth but develop slowly and do not assume their complete form until puberty or even later.

The nasal accessory sinuses in the adult are very variable with regard to form, dimensions, capacity and the situation of their apertures.

These cavities are lined with a mucous membrane which differs from the mucous membrane of the nose in degree rather than in kind. The glandular elements and nerve filaments are less numerous and the blood supply less abundant, which points to a lessened power of regeneration. This is an argument against extensive operative intervention and in favor of conservatism in dealing with these sinuses.

With the opening of these sinuses in close proximity infection of one from the other is always imminent. Therefore the frontal, anterior ethmodial and maxillary sinuses which constitute the anterior group and open near each other in the region of the hiatus-semi-lunaris are frequently observed to be concomitantly diseased. We also find the posterior ethmodial cells very often involved in case of suppuration of the sphenoid, or vice versa because these two constitute the posterior group opening near each other in the region of the superior meatus.

* Read before the Raleigh County Medical Society, at Beckley, West Virginia, October 15, 1925.

In addition to the fact that certain of these sinuses are in such intimate anatomic relation through their cells, walls and ostia, another cause for their mutual pathological dependence is to be found in their common vascular and vaso-motor supply. Causes acting through these media are likely to influence, in a greater or less degree, the entire nasal cavity.

In addition to causes common to other sinuses the antrum is subject to infections of dental origin, most commonly being the second bicuspid and first molar which are in close anatomical relation with its floor.

A sagittal section exposing the wall of the nose shows the frontal sinus with its outlet at the most dependent place so that the secretion will fall down through a narrow channel opening into the upper part of the hiatus semi-lunaries or just anterior to it. The opening of the maxillary sinus is situated near the roof so when the patient is in the upright position no fluid can flow by force of gravity until the cavity is practically full. The same is true of the sphenoid whose opening is on the anterior sinus wall in the superior meatus.

Wells[1] says, "The deduction generally made with regard to treatment is that while a frontal sinus may be depended upon to get rid of a purulent collection because of the favorable situation of its outlet for drainage, the case is hopeless for the antrum and the sphenoid unless surgical measures are resorted to, but to hold such a view means to have far too little confidence in the resources of nature, who provides other means of emptying the sinuses than gravity alone."

Skillern[3] has shown that if finely powdered lamp black is strewn over the mucous lining of the sinuses of freshly slaughtered calves, the black particles may be observed to travel the space of one centimetre per minute towards the osteum, no matter what the situation, and that in a short time it will have completely escaped in to the nasal cavity. The mucous membrane of the nasal accessory sinuses is of the ciliated type and the cilia are in rapid and constant motion and always toward the sinus opening. We see, therefore, in the action of these cilia a powerful force overcoming the law of gravity. It is important, therefore, that their integrity be maintained so that they may function normally at all times. To do this it is necessary to use no medicants which have not been warmed, and in solution they must be alkaline and bland, never strongly irritating. Should the secretions become thick, viscid and abundant, ciliated action is embarrassed and their removal is a rational indication.

Apertures of the sinuses are maintained evidently by nature for another function besides draining away the secretions. Just as the tympanic cavity becomes congested and diseased when its normal supply of air is cut off by obstruction of the Eustachian tubes, so the nasal sinuses suffer when the ostia become in any way occluded. The air in the enclosed cavity becomes gradually absorbed, and the resulting rarefaction tends to produce a sagging in of the yielding membranous lining attended with marked passive congestion. If, in such a case, a purulent secretion is already present in the cavity, saphrophytic micro-organisms multiply and bring about a decomposition of the stagnant secretions. It is quite likely that the severe pain experienced in some cases of sinusitis may be due to the pressure of gases arising from the decomposition of pus. Many physiological facts seem therefore to point to the positive necessity of keeping these ostia clear, as one of the prime indications of sinus treatment.

Investigators have shown that pyogenic cocci are more often responsible for sinus suppuration than bacilli. Those most frequently found are the pneumococci, streptococci, staphlococci, and diplococci. Lindenthal was first to point out sinus infection as directly and primarily due to specific organisms of influenza, croupous pneumonia, diphtheria and erysipelas.

On anatomical and physiological grounds we have an argument against surgical procedures which involve extensive injury to the parts.

J. Gordon Wilson[2] says: "To replace epithelium in a dependent cavity by scar tissue is to replace it with tissue with no physiological action. I cannot conceive of a

healthy antrum existing after extensive curretage. The teaching of nature is obvious. The mucous membrane of the sinuses is doing important work; we may aid by reducing chronic vascular and lymphatic engorgement; we may assist in the removal of excess secretions but if we do so at the expense of permanent damage to the ciliated walls we may go slowly and ask what compensation we offer for the loss."

Skillern[3] in closing a paper on the End Results of Radical Operations on the Accessory Sinuses, says: "Finally let us remember that experience has taught us radical operations upon the accessory sinuses do not always spell radical cures."

Medical treatment of the nasal accessory sinuses requires general as well as local measures. In acute conditions it is better to confine the patient to his room and use remedies to combat infection and relieve pain. The salicylates are used extensively. Aspirin and phenacetin are very effective because of their anodyne action. Calomel followed with epsom salts or magnesium citrate seems to reduce sinus congestion.

For more chronic conditions general tonics and hygienic treatment are necessary.

Local treatment is very important and should be an assistant to nature. If the nasal cavity or sinus ostia are blocked by polypi, a septal spur or hypertrophied middle turbinate, it is necessary that the obstruction be removed. If obstruction is due to acute inflammatory swelling of the mucous membrane about the orifice the application of a cocain solution to this region reduces the swelling. Then local measures should be used with the aim of keeping free the communication between the sinuses and nose so that drainage and ventilation shall be unimpeded. Irrigation with a warm saline and soda solution is agreeable and effective for the purpose of cleansing the nasal passages, and some investigators state, produces some aspiration upon the sinus cavities.

Steam inhalations of compound tincture of benzoin or menthol in alcohol are agreeable to the patient; have a favorable action on the mucous membrane and aid in liquefying the thickened secretions.

Another means of evacuating the sinuses which I have found useful is strong negative pressure. After the swollen tissue has been treated with a cocaine solution to open the ostia, negative pressure applied to the nasal fossa tends to aspirate the secretions from the accessory cavities.

Mercurochrome 220 soluble injected into the sinus cavities produces excellent results in some cases. After irrigating the antrum I have injected a 1% solution with good results.

In all cases after irrigating the nasal and accessory cavities I use a spray of some mild solution such as camphor and menthol in liquid albolene.

In conclusion, let me say, that in presenting this paper I am not condemning surgical treatment, for every surgeon, of course, recognizes that there are cases beyond the pale of conservative measures and for which surgical treatment is definitely indicated. But certainly it is better to employ conservative measures in a case which later must be operated upon than to operate upon a case which could have gotten well without it.

* * *

REFERENCES

[1] Walter A. Wells: Non-Surgical Treatment of Inflammation of the Nasal Accessory Sinuses, The Laryngoscope, May 1917.

[2] J. Gordon Wilson: Etiology of Pan-Sinusitis, The Laryngoscope, September 1915.

[3] Ross Hall Skillern: Radical Operations of the Accessory Sinuses, Annals of Otology, Rhinology and Laryngology, March 1923.

EYELASH SIGN IN COMA

In comatose patients, on touching the eyelashes in functional diseases like hysteria, catatonia and epilepsy there is a winking-like movement of the eyelids—while in organic brain diseases like cerebral hemorrhage, coma following convulsions in paresis and in skull fractures no such winking takes place.—Lemchen, in *Illinois Med. Journal.*

ORAL SEPSIS AS AN ETIOLOGICAL FACTOR IN PEPTIC ULCER *

By JAMES S. KLUMP, M. D.
Huntington, W. Va.

THE subject of focal infection, although a comparatively recent one, has come to occupy a prominent place in our study of the etiology of disease. Over thirty years ago a German university professor, Muller, first pointed out to the medical profession the relations between infections of the mouth and many general constitutional diseases, but little attention was paid to the subject, either in this country or abroad, until it was exhaustively studied in the clinic attached to Rush Medical College in Chicago, by Frank Billings and E. C. Rosenow and their corps of able assistants. Although the work in Chicago was begun in 1904, it was not until 1913 and 1914, when the results of a vast amount of experimental work had been carefully checked up that the medical profession and the public at large were placed in possession of the facts concerning focal infection, which have practically revolutionized our conceptions of the etiology of disease. Today a clear and intelligent conception of the theory of focal sepsis and its application to the diagnosis and treatment of disease is essential to everyone who practices any branch of medicine.

By a condition of focal sepsis, as it is now generally understood, we mean the existence in any part of the body of a pus-collection which is capable of generalizing and disseminating bacterial poisons through the blood or lymph stream, so that infection may be carried to the remotest parts of the body. Billings[1] defines a focus of infection as a circumscribed area of tissue infected with micro-organisms. The usual site of such infections is in the head in the form of alveolar abscess, pyorrhea dentalis, infection of the faucial and nasopharyngeal tonsils and of the mastoid, the maxillary and other accessory nasal sinuses. However, a focus of infection may be located anywhere in the body and it may be either primary or secondary. Submucous and subcutaneous abscesses, chronic infection of the bronchi, of the gastrointestinal tract and auxiliary organs of digestion, including cholecystitis, appendicitis, intestinal ulcers and intestinal stasis may exist as primary or as secondary foci of infection. Other not uncommon forms of focal infection may be found in the genito-urinary tract, and include metritis, salpingitis, vesiculitis, prostatitis, cystitis and pyelitis. Infected lymphnodes, which are secondary to primary foci, such as have been named, become additional depots of local infection, and these secondary lymph infections may exist after the etiologic, distal primary focus has been removed, or has spontaneously disappeared.

Many types of bacteria may be found involved in the process of focal infection. The pathogenic bacteria most commonly found are the streptococci, the pneumococci and the staphylococci, though the gonococci may be found in genito-urinary infections, and colon bacilli mixed infection may be found anywhere in the body. A number of other micro-organisms are less frequently found.

Billings,[2] in 1912, emphasized the relation of focal infections to arthritis and nephritis, and from this time the interest in focal infection with relation to constitutional disease has steadily increased. Interesting as is the literature on focal infection in its various phases, we have chosen to limit ourselves to septic foci in the oral cavity in relation to peptic ulcer, and in this connection it is of particular interest that Rosenow[3] in 1913

* Presented before the Section on Surgery of the West Virginia State Medical Association, at Bluefield, June 11, 1925.

published his first article showing that the intravenous injection of steptococci may be followed by ulcer of the stomach and duodenum. Later he demonstrated that streptococci are frequently found in ulcer of the stomach in man, and that such streptococci when isolated from the ulcer, as well as those from foci of infection in the same individual, when injected into animals gave rise to ulcers of the stomach and duodenum resembling the ulcers seen in man.

In 1921, Rosenow[4] writes: "The history of ulcer symptoms in the 27 cases studied ranged from 6 months to 21 years. The ages of the patient ranged from 27 to 53 years. All had active symptoms at the time of study, and two had had gastric hemorrhage a short time previously. Only four had a history of attacks of tonsilitis; two had arthritis in addition to ulcer. In none were the tonsils acutely inflamed; most of them were small and contained a large pocket at the pole from which pus could be expressed. The cultures from dental foci were chiefly from infected areas in the apical region of devitalized teeth. The size of the areas of rarefaction around the teeth varies greatly. All were symptomless. In no instances did these areas contain visible pus and none communicated with the surface through a sinus. Tonsillectomy was advised and performed in four cases because of the striking localization of the streptococci in the stomachs of experimental animals. Improvement in the ulcer symptoms followed in each case. In three cases elective localization occurred with streptococci from the tonsils and from the ulcer. No localization followed intravenous injection of the streptococci in two cases, nor from the excised ulcer in one case." In this paper Rosenow cites the case of a man who had had recurring attacks of ulcer with hemorrhage and on whom a gastro-enterostomy had been performed twelve years before. No attention was paid to the question of foci of infection at that time. After the surgical removal of five infected teeth the patient's symptoms gradually disappeared under medical management, although heretofore his condition had been refractory to this treatment. The streptococci from three teeth and from one devitalized tooth, which showed no granuloma were injected into four rabbits. All these animals later showed hemorrhage and ulcer of the stomach. On the basis of experiments such as these Rosenow concludes that foci of infection must be considered as an important factor in the production of peptic ulcer in man.

We have dwelt upon the work of Rosenow, because to him belongs the credit of having centered attention on this phase of focal infection. His conclusions have not, however, been unqualifiedly accepted by other observers. Einhorn,[5] for instance, scarcely makes mention of infection in considering the etiology of peptic ulcer. Others, like Mann and Williamson,[6] claim to have produced gastric and duodenal ulcers by damaging the gastroduodenal mechanisms so that areas secreting acid secretions had alkaline secretions poured over them, while areas secreting alkaline fluid received acid secretions. The literature abounds with the reports of investigators who have endeavored to explain gastric and duodenal ulcer on the ground of changes in the acidity and alkalinity of the secretions of the stomach and duodenum. Smithies,[7] in an extended review of the literature on the etiology of gastric and duodenal ulcer, and an analysis of 522 cases, draws up an etiologic therapeutic classification consisting of ten groups. These are infections, chronic and acute; arteriosclerosis; chronic anemia; syphilis; visceral hypotonia; post-operative; industrial intoxication; metabolic dysfunction and trauma. In Smithies' 522 proved cases of ulcer 173 were due to infection, i. e. 33.1 per cent.

In a study of 37 cases of recurrent gastric or duodenal ulcer, Eustermann,[8] summarizes the evidence for the infectious theory of ulcer, somewhat as follows: "The theory that infection is the cause of ulcer is the only one that is tenable at this stage of medical progress. The seasonal incidence of exacerbations or onset of the primary attack of peptic ulcer occurs during the months when tonsilitis, sinusitis and respiratory affections are most prevalent. Fatigue, chill, exposure and so on are predisposing factors, when the resistance of the host is temporarily lowered.

Symptoms of ulcer sometimes first become manifest within several weeks or months after devitalization of teeth. Exacerbations of ulcer symptoms are coincident with the extraction of infected teeth or tonsils, or with exacerbations of infection in these structures themselves. The epidemics of influenza have been followed by a marked increase in inflammatory lesions of the digestive tract, including the biliary apparatus, pancreas and appendix, or by an aggravation of symptoms in organs involved prior to the epidemic. This may be explained by factors inherent to this infection, or more probably by the influence of existing foci, due to the coincident lowered resistance of the individual. Persistent gastric malfunction without demonstrable local lesions has ceased after removal of septic or abscessed tonsils, or devitalized teeth with periapical disease, or after drainage and treatment of suppurating sinuses. Suppurative gingivitis, the result of extensive pyorrhea, provokes an infectious gastritis, and if not taken care of in time, may result in permanent damage to the gastric glandular tissues. On the other hand, infection that is walled in and is under tension undoubtedly produces embolical focal lesions of the digestive tract through the blood streams."

Among the more recent experimental work that confirms Rosenow's demonstration is that of Nakamura, who selected nine patients with gastric symptoms for animal tests. Of 66 rabbits inoculated with strains from the tonsils in these patients, 46 (70 per cent.) had hemorrhage or ulcer or both in the mucous membrane of the stomach. A streptococcus similar to that found in the pus from the patient's tonsils and in the extirpated tonsils was isolated from both the hemorrhagic and the ulcerated areas in the stomachs of the rabbits. The microscopic changes in the lesions consisted mainly of a variable degree of sharply localized interstitial infiltration of erythrocytes, leukocytes, eosiniphils and round cells. Another piece of confirmatory experimental work was recently published by Haden and Bohan, who studied 17 cases of undoubted clinical gastric and duodenal ulcer. In 12 patients, dental infection was probably the primary cause. Forty-five rabbits were injected with cultures from dental foci in three patients; 53 per cent. of the animals showed peptic lesions at necropsy. Only 7 per cent. of 535 controls showed peptic lesions at autopsy. These authors find that the duodenal lesions produced experimentally are limited to the duodenal bulb, just as they are in man, while the gastric lesions have a similar anatomic distribution. They urge that patients with peptic ulcer be thoroughly studied from the standpoint of chronic infection, and all possible foci removed. They also agree with Eustermann in the statement that gastroduodenal malfunction without demonstrable focal lesions may likewise be a manifestation of focal infection. They point out that infection remaining at the site of excised tonsils is much less important than residual infection at the site of extraction of teeth.

From the evidence adduced it seems possible to exclude focal infection, and particularly oral infection, as a cause of gastric and duodenal ulcer, but at the present moment it would be exceedingly rash to say that it is the only or even the chief cause. The point that is to be emphasized is that it is an etiological factor that must never be overlooked in the management of a case of peptic ulcer. Among noted authorities who recognize the importance of focal infection in relation to peptic ulcer is Deaver,[11] who says: "The fact that more than one factor is concerned in the etiology of peptic ulcer is gaining recognition. The theories of infection and alteration of the gastric secretion as the primary factors in the pathogenesis of ulcers are the ones most acceptable today." C. H. Mayo[12] observes that internists admit the elective action of certain bacteria in the development of ulcers, but have considered the cause of the ulcers unproved in as much as they heal later. It is true that this tendency to heal exists in the dog. In man, however, a focus of disease will continue to deliver the causative bacteria to the blood from time to time and will relight the dormant ulcer, producing recurrent disease.

Having recognized the possible importance of foci of infection in the production and re-

currence of peptic ulcer, we may well ask the question, "What bearing has this new knowledge of the etiology of peptic ulcer on our management of the patient with a gastric or a duodenal ulcer?" The logical procedure to follow when a patient presents himself with the symptoms of peptic ulcer is not to omit our usual laboratory examinations, but to add to them as of equal importance a thorough search for foci of infection. To return to Rosenow's[4] article which we quoted above, we find this statement: "The careful elimination of foci of infection should become a routine procedure in both the medical and surgical management of these diseases. The focus should be removed before the mechanical factors, such as scar tissue in the chronic ulcer, have come to play a dominant part. The benefits should be especially noticeable in preventing acute attacks, in diminishing the number and severity of exacerbations, and in reducing the incidence of gastro-jejunal ulcer after gastro-enterostomy."

With reference to the surgery of focal infections, this must take into account all that is known of this very extensive subject. Physiology and anatomy, chemistry and physics, biology and histology, all have important relation to it. Perhaps with the new knowledge, the surgeon will not be in such haste to operate on the stomach and duodenum, before he has excluded the possibility of a distant focus of infection. On the other hand, possibly the internist, by a careful search will locate a septic focus the elimination of which will make unnecessary indefinitely prolonged medical treatment with its uncertain outcome. Before resorting to tonsillectomy or any of the forms of oral surgery, the surgeon must, however, consider the natural defense which the living organism is able to set up against the invasion of toxic bacteria; and likewise its powers of recuperation, once invasion has taken place and injury has resulted. Time forbids that we stop to discuss the various methods to be employed in the elimination of foci of infection. The technical procedures by which such infections are to be dealt with are the concern of the oral surgeon, the laryngologist, or other specialist.

We can not do better in reference to the general management of cases in which focal infection is playing a part than to quote the advice given by Billings: "The removal of a focus of infection is demanded as a fundamental principle in the treatment of systemic diseases, especially of the chronic type. Thereafter management must be individual, based on the character and location of the infection. The effort to immunize the patient against the infection must be attempted by restorative measures—food, pure air, passive graduated exercise, hematinic tonics, optimistic surroundings, etc. Autogenous vaccines may be used with rational reservations."

A point always to be mentioned in connection with focal infection is that the removal of one focus of infection cannot always be depended upon to relieve the disease, for the reason that there may be multiple foci and relief cannot be hoped for until every source of bacteria toxins has been eradicated.

Since, as we have shown, focal infection is by no means the only cause of peptic ulcer, we cannot hope that removal of all foci of infection will immediately clear up every case of this disease, but having eliminated focal sepsis as a cause, and having given medical treatment a fair trial, one can have recourse to surgery with full assurance that he is pursuing the proper course. Furthermore with the reservoirs of infection cut off the after-treatment of a patient who has been subjected to surgery will be much simpler and the chances of recurrence will be much diminished. Here it may be of interest to note that Duval[13] calls attention to the fact that an operation on an infected ulcer of the stomach may be complicated by peritonitis, defective healing of the wound or perigastric suppuration, also by bronchopneumonia. The latter complication is sometimes erroneously ascribed to the effect of the anesthetic. Only patients without or with very mild infection should be operated upon. The treatment in connection with strengthening the resistance of the patient

by general measures instituted in combatting focal infection should be effective in lessening the amount of local infection in the ulcer itself.

Any object in bringing these facts to your notice is simply to emphasize that in dealing with gastric and duodenal ulcer we have a new factor which must be taken into consideration, a factor that must enter into our treatment of these cases, and one the recognition of which may ultimately enable us to secure much better results than we have heretofore been able to achieve.

* * *

REFERENCES

1 Billings, Frank: Focal infection in the etiology of general disease. J. A. M. A.., 63:899, Sept. 12, 1914.

2 Billings, Frank: Chronic Focal infections and their etiologic relations to arthritis and nephritis. Arch. Int. Med., 9:484, 1912.

3 Rosenow, E. C.: The production of ulcer of the stomach and duodenum by infections of streptococci., J. A. M. A., 61:1942, Nov. 29, 1913. The etiology of spontaneous ulcer of the stomach in animals. J. Infect Dis., 19:333, Sept., 1916. The specificity of the streptococcus of gastroduodenal ulcer and certain factors determining its localization. J. Infect. Dis., 33:249, Sept., 1923.

4 Rosenow, E. C.: Focal infection and elective localization of bacteria. Surg., Gynec. & Obst., 33:25, July, 1921.

5 Einhorn, Max: Nelson's Loose Leaf Medicine.

6 Mann, F. L. & Williamson, C. S.: The experimental production of ulcer. Ann. Surg., 77:409, April, 1923.

7 Smithies, Frank: Significance of etiologic factors in the treatment of peptic ulcer. J. A. M. A., 74:155, June 5, 1920.

8 Eustermann, G. B.: Recurrent Ulcer of the stomach and duodenum. Clinical notes on incidence, diagnosis and etiology. Minn. Med., 6:698, Dec., 1923.

9 Nakamura, T.: A study on focal infection and elective localization in ulcer of the stomach and in arthritis. Ann. Surg., 79:29, Jan., 1924.

10 Haden, R. L. & Bohan, P. T.: Focal infection in peptic ulcer, J. A. M. A., 84:410, Feb. 7, 1925.

11 Deaver, J. B.: Chronic peptic ulcer. Boston M. & S. J., 190:776, May 8, 1924.

12 Mayo, C. H.: Focal infection in chronic and recurring disease. Virginia Med. Monthly, 49:557, Jan., 1922.

13 Duval: Infected gastric ulcer. Ball. de Academic de Med., Paris, 92:1257, Nov., 1924. Abst., J. A. M. A., 84:235, Jan. 17, 1925.

NEED OF EXAMINATIONS

Individuals who need a periodic health examination at regular intervals are: 1. Healthy individuals who want to keep their health. 2. Near well individuals who think they are healthy but who are uncomfortable, dissatisfied, and who sometimes suffer pain. They have bad health habits, defects or impairments which, corrected, would place them in the healthy group. 3. Individuals who think they are ill, but who are merely the victims of bad physical and mental habits. 4. Unhealthy individuals who constantly have colds, boils or abscesses. They have defects, impairments and habits which need the attention of a competent physician. 5. Ill individuals with chronic disease or impairment which, treated properly, would prolong life and usefulness for many years.—Wood, T. D., and Dansdill, T.: *By-Ways to Health*, 1925, p. 7.

———o———

VIEWED FIRST SHOWING OF MOTION PICTURES

It will be of interest to the profession to know that one of our members, Dr. William S. Magill of Morgantown, was a member of a party of 34 persons who witnessed the first exhibition of motion pictures ever given. Dr. Magill was in Paris thirty years ago when the Lumiere brothers revealed to a highly skeptical public what is believed to have been the first motion picture exhibition. The French recently celebrated the thirtieth anniversary, dedicating a memorial tablet in a famous boulevard cafe, the same spot where the Lumiere brothers staged what is described in a recent copyrighted dispatch to the *New York Times* as "the first successful display of animated objects on the screen."

———o———

MOVES TO FLORIDA

Cards have been received announcing that Dr. Tom A. Williams, well known in West Virginia, has moved his office from Washington, D. C., to 208 Exchange building, Miami, Fla.

THE WEST VIRGINIA MEDICAL JOURNAL

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS

J. HOWARD ANDERSON, Marytown — WALTER E. VEST, Huntington — CHARLES W. WADDELL, Fairmont — HARRY M. HALL, Wheeling

THE JOURNAL issued on the first of each month. Entered as second-class matter, January 1, 1926. Acceptants for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Authorized July 24, 1919.

Subscription to Members	$2.00 Per Year
Subscription to Non-Members	$3.50 Per Year
Single Copies	35 Cents

OFFICERS

President:
J. R. BLOSS ..... Huntington

First Vice-President:
R. O. ROGERS ..... Bluefield

Second Vice-President:
H. C. SKAGGS ..... Montgomery

Third Vice-President:
D. A. MACGREGOR ..... Wheeling

Treasurer:
HUGH G. NICHOLSON ..... Charleston

Executive Secretary:
MR. STERRETT O. NEALE ..... Charleston

Delegate to A. M. A., 1926:
J. R. BLOSS ..... Huntington
C. R. OGDEN, *Alternate* ..... Clarksburg

Delegate to A. M. A., 1926-27:
H. P. LINSZ ..... Wheeling
R. A. ASHWORTH, *Alternate* ..... Moundsville

COUNCILORS

First District:
H. P. LINSZ, (1-year term) ..... Wheeling
C. G. MORGAN, (2-year term) ..... Moundsville

Second District:
C. H. MAXWELL, (1-year term) ..... Morgantown
C. H. HALL, (2-year term), ... Elkins

Third District:
JOHN FOLK, (1-year term) ..... Bridgeport
C. R. OGDEN, (2-year term) ..... Clarksburg

Fourth District:
J. E. RADER, (1-year term) ..... Huntington
W. E. VEST, (2-year term) ..... Huntington

Fifth District:
J. H. ANDERSON, (1-year term) ..... Marytown
H. G. STEELE, (2-year term) ..... Bluefield

Sixth District:
R. H. DUNN, (1-year term) ..... South Charleston
C. A. RAY, (2-year term) ..... Charleston

¶ All original articles for THE JOURNAL must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

¶ Our readers are requested to send marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

¶ It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

¶ Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

¶ Advertising forms will go to press not later than the tenth of each month. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

¶ Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, 303 Professional Building, Charleston, W. Va.

STANDING COMMITTEES

Medical Defense Committee

H. P. Linsz, Wheeling; C. R. Ogden, Clarksburg; C. G. Morgan, Moundsville.

Committee on Scientific Work

G. H. Barksdale, Charleston; O. D. Barker, Parkersburg; D. A. MacGregor, Wheeling, Scientific Secretary.

Public Policy and Legislative Committee

C. A. Ray, Charleston; G. A. MacQueen, Charleston; R. H. Walker, Charleston; James McClung, Richwood; J. R. Bloss, Huntington; D. A. MacGregor, Wheeling.

Committee on Hospitals

Robert J. Reed, Wheeling; B. H. Swint, Charleston; R. J. Wilkinson, Huntington.

Committee on Professional Relations

J. R. Shultz, Charleston, chairman, (3-year term); H. G. Nicholson, Charleston, (1-year term); H. R. Johnson, Fairmont, (2-year term); A. G. Rutherford, Welch, (4-year term); W. R. Goff, Parkersburg, (5-year term).

Surgical Section

E. Bennette Henson, Charleston, chairman; W. R. Goff, Parkersburg, secretary.

Eye, Ear, Nose and Throat Section

T. W. Moore, Huntington, chairman; R. A. Tomassene, Wheeling, secretary.

Woman's Auxiliary Officers

President, Mrs. A. G. Rutherford, Welch; *First Vice President*, Mrs. W. H. St. Clair, Bluefield; *Second Vice President*, Mrs. J. P. Lilly, Morgantown; *Secretary*, Mrs. C. M. Scott, Bluefield; *Treasurer*, Mrs. C. A. Ray, Charleston.

EDITORIAL

DIPHTHERIA

It has been demonstrated that toxin-antitoxin will immunize a person against the infection of diphtheria for a number of years and perhaps for all time. As yet it is not generally known by the laity that this most dreaded disease can be so easily and effectively prevented. How are we as physicians to get this knowledge to the public in a clear and understanding manner?

The control and eradication of malaria and yellow fever in states and countries heretofore almost uninhabitable have been made garden spots of the earth through intervention of governments. Small-pox has lost most of its terrors through vaccination. Typhoid fever is now considered due to lack of prophylaxis and hygiene. We still have a few sporadic cases of typhoid, small-pox and malaria, but not in malignant form, because civil authorities step in and have the sources of infection cleaned up, quarantined, and those who have been exposed are immunized. Diphtheria anti-toxin has done wonders in the cure of diphtheria. Toxin-antitoxin as a prevention would do greater wonders in saving of life if its use were universally adopted.

Doctors may only advise, but laws can compel, and we favor such a law in West Virginia in the prevention of diphtheria. The writer practiced medicine before the days of antitoxin and stood back with hands tied as it were, to watch almost a whole family wiped out within a week's time.

We were fortunate enough to be present and witness the first administraton of the first dose of antitoxin ever given in America and from that day have been an ardent advocate of preventive medicine through the medium of education. Let the public know the benefits to be derived and the little harm that can possibly come from the use of this immunizing agent, and it will only be a few years until this dreaded disease will be but a memory to those who have seen and suffered. Education of the public by and through the establishment and proper administration of county health units in every county of every state in the union is the most feasible mode of procedure.

Why not the physicians of West Virginia combine their efforts to have established in every county a health officer who will be thoroughly trained in the administration of such an office and a teacher of the public in hygiene and prevention of disease?

By making such a law state-wide and compulsory, there would unquestionably be a great economic saving to the tax payers of the state. As we have said before, small-pox has been robbed through vaccination of its former terrors, yet there is enough money spent in West Virginia for the control of this disease to pay half the expense of full time health officers, who could and would prevent and control many other diseases, the mortality of which is many times that of small-pox. We think that within the next quarter of a century diphtheria could be wiped off the face of the earth, and we are in favor of West Virginia being one of the leaders in this great work. —C. A. R.

———o———

THE COMING CAMPAIGN

There are several men coming up for the legislature in Ohio County, whose candidacies are important. We hear Mr. Harry

Weis and Attorney George Beneke are going to run. From many standpoints, we have the highest regard for both of these men. Citizens everywhere, without regard to creed or color, regard them as the best kind of men in many ways. Both have been successful in their vocations; have occupied high positions in fraternal organizations; are considered popular companions and are regarded as the best kind of personal friends. Nor is our quarrel with their characters, their abilities, or their personalities. We disagree with them on matters of policy as a Democrat would differ with a Republican. We report their running as important and very timely news. Any doctor in this State familiar with the activities of the last legislature knows where both of them stood. He knows they stood with the Chiropractors and any other cult that appeared as having a following. We are not questioning their motives nor their honesty. If they believed they were right and were reflecting their constituents that is their affair. They no doubt believed they were doing the right thing. They were put there to weigh matters and vote. They decided to vote against the Medical Profession. That is their business. Their responsibility. No one should tell anyone they *must* or *must not* vote this or that way. What are the doctors going to do about it? There are two ways. Oppose them! Secondly, to let it go by as not a matter to bother about. A friend of mine told me the Doctors could elect them both by opposing them. So there you are. This writer will make no comment. Either way is all the same now. There are so many backward doctors in this State who refuse to take any part in this matter that those who have done the fighting believe they can stand any adverse legislation as well as anybody else. So we present the matter as very timely news—no more and no less.

—H. M. HALL.

THE ANNUAL MEETING

We have today had the pleasure of looking over the tentative program of the coming State Association Meeting in Morgantown, and are pleased to note that it is without a doubt one of the best balanced programs that has ever been given. It is especially gratifying that so many of the younger men are taking part. This is a most healthful sign for as much as the older men are valued the future of any organization is dependent upon today's younger men.

Morgantown with its new hotel is making a real effort to make this meeting a success. The program is excellent. In brief, we, with all of the others we have talked with, are enthusiastic and are looking forward to the coming meeting with genuine enthusiasm.

—G. H. B.

———o———

ATTEND A. M. A. MEETING

Among those members of the West Virginia State Medical Association who were registered at the A. M. A. meeting in Dallas were Frank J. Collison of Bluefield; H. P. Linsz of Wheeling; William L. VanZant of Hinton, and Matthew F. C. Zubak of Wheeling. Dr. Linsz was chairman of the reference committee on rules and order of business, having received his appointment from Dr. F. C. Warnshuis, of Michigan, speaker of the House of Delegates of the A. M. A.

———o———

A physician who had been unable to collect a three-year-old account from a family well able to pay—the same being an obstetrical fee and numerous statements having been ignored—determined to write a postscript to his next one. In red ink, he wrote at the bottom of his statement, "I should think you would like to own your last baby *unmortgaged.*" The bill was paid promptly.

OFFICIAL CALL

To the Officers, Delegates and Members of The West Virginia State Medical Association

The fifty-ninth annual session of the West Virginia State Medical Association will be held in Morgantown from Monday, May 24th to Thursday, May 27th, 1926.

The Council will convene Monday, May 24th, at 2 p. m. in Hotel Morgan.

The House of Delegates will convene Monday, May 24th, at 7:30 p. m. in Hotel Morgan.

The general scientific assembly will convene Tuesday, May 25th, at 9:00 a. m. in the Elks' Home.

The scientific sections on medicine, surgery, and eye, ear, nose and throat will meet at 9:00 a. m. Wednesday, May 26th, in the Elks' Home.

The annual presidential address and the orations on medicine and surgery will be delivered at a meeting open to the public in the Elks' Home, Tuesday, May 25th, at 8:00 p. m.

Registration Department

The registration department will be open in Hotel Morgan the morning of Monday, May 24th, at 10:00 a. m. and thereafter until 10:00 p. m. It will be transferred to the Elks' Home on Tuesday, May 25th, and will be open there from 9:00 a. m. until 8:00 p. m. daily until the close of the convention.

Information Department

An information department will be open to all visitors in the Elks' Home during the three days of the general sessions.

Respectfully,
STERRETT O. NEALE,
Executive Secretary.

ANNOUNCEMENTS

The committee on scientific work has prepared the program printed here for the next annual meeting of our Association which will be held at Morgantown, West Virginia. In compiling a program such as this it is inevitable that certain mistakes and omissions occur. Any suggestions for the correction of such mistakes or omissions should be sent to Dr. D. A. MacGregor, Wheeling, W. Va., Scientific Secretary.

1. Information and registration booths will be conducted in Hotel Morgan during May 24 and at the commercial exhibits hall in the Elks' Home May 25, 26, 27. Members and guests are urged to register immediately upon arrival so that this work may be expedited as much as possible.

2. All meetings, except the preliminary sessions of the Council and House of Delegates which will be held in Hotel Morgan, will be conducted in the Elks' Home.

3. The medical section will meet in the Home's main assembly room; the sections on surgery and eye, ear, nose and throat will meet in rooms provided on the second floor.

4. Exhibits will be found in rooms immediately adjacent to the main assembly room.

5. All papers by members of the state association will be limited to twenty minutes and discussion of five minutes. This rule will be strictly enforced by the presiding officer.

6. All papers read will be the property of the association and the West Virginia Medical Journal and each paper should be deposited with the secretary at the close of its reading. This is highly necessary to keep the transactions of the meeting intact.

7. The annual election of officers will be conducted May 27 at 8 a. m. in the Elks' Home.

8. To avoid confusion, delegates and members are urged to bring their membership certificates or credentials with them so that they may be properly identified as the members whose names appear on the Secretary's roster.

9. The golf tournament will be conducted May 24 on the Morgantown Country Club course. Dr. B. M. Stout is chairman of this committee.

10. Visitors are urged to visit the commercial exhibits. Commercial exhibits this year are contracted for by the Merrell-Soule Company of Syracuse, N. Y., Standard Oil Company of New Jersey; Victor X-ray of Chicago; Feick Brothers of Pittsburgh; E. R.

Squibb & Sons, New York; Laboratory Products Company of Cleveland; Professional Equipment Company of Cincinnati; Denver Chemical Company of Denver, Col., Engeln Electrical Company of Pittsburgh; Max Wocher & Son, Cincinnati; H. G. Fischer & Company, Chicago; Columbus Pharmacal Co., of Columbus, O., Kloman Instrument Co., of Washington, D. C., and Robert A. Fulton Co., of Pittsburgh.

ORDER OF BUSINESS

Preliminary Sessions of Council and House of Delegates.

Call to order by President or Chairman.

Review Credentials.

Reports of

- Committee on Scientific Work,
- Committee on Publication;
- Committee on Public Policy and Legislation;
- Secretary;
- Treasurer;
- Councillors;
- Auditing Committee.

New Business.

Election of Officers May 27 at 8 a. m.

Selection of city for 1927 meeting.

Unfinished business.

OFFICERS FOR 1926

President—James R. Bloss, Huntington.

First Vice-President—R. O. Rogers, Bluefield.

Second Vice-President—H. C. Skaggs, Montgomery.

Third Vice-President—D. A. MacGregor, Wheeling. (Scientific Secretary.)

Treasurer—H. G. Nicholson, Charleston.

Councillors

First District—Brook, Hancock, Marion, Marshall, Ohio, Taylor and Wetzel Counties; 1926—H. P. Linsz, Wheeling; 1926-27—C. G. Morgan, Moundsville.

Second District—Barbour, Berkley, Grant, Hampshire, Hardy, Jefferson, Mineral, Monongalia, Morgan, Pendleton, Preston, Randolph and Tucker Counties; 1926—C. H. Maxwell, Morgantown; 1926-27—C. H. Hall, Elkins.

Third District—Braxton, Clay, Calhoun, Doddridge, Gilmer, Harrison, Nicholas, Ritchie, Lewis, Upshur and Webster Counties; 1926—John Folk, Bridgeport; 1926-27—C. R. Ogden, Clarksburg.

Fourth District—Cabell, Jackson, Mason, Putnam, Pleasants, Roane, Tyler, Wood and Wirt Counties; 1926—J. E. Rader, Huntington; 1926-27—Walter E. Vest, Huntington.

Fifth District—Lincoln, Logan, McDowell, Mercer, Mingo, Monroe, Summers, Wayne and Wyoming; 1926—J. H. Anderson, Marytown; 1926-27—H. G. Steele, Bluefield.

Sixth District—Boone, Fayette, Greenbrier, Kanawha, Pocahontas and Raleigh Counties; 1926—R. H. Dunn, South Charleston; 1926-27—C. A. Ray, Charleston.

Standing Committees

Medical Defense Committee—H. P. Linsz, Wheeling; C. R. Ogden, Clarksburg; C. G. Morgan, Moundsville.

Committee on Scientific Work—G. H. Barksdale, Charleston; O. D. Baker, Parkersburg; D. A. MacGregor, Wheeling, Scientific Secretary.

Public Policy and Legislative Committee—C. A. Ray, Charleston; G. A. MacQueen, Charleston; R. H. Walker, Charleston; James McClung, Richwood; J. R. Bloss, Huntington; D. A. MacGregor, Wheeling.

Committee on Hospitals—Robert J. Reed, Wheeling; B. H. Swint, Charleston; R. J. Wilkinson, Huntington.

Committee on Professional Relations—J. R. Shultz, Charleston, chairman, (3-year term); H. G. Nicholson, Charleston, (1-year term); H. R. Johnson, Fairmont, (2-year term); A. G. Rutherford, Welch, (4-year term); W. R. Goff, Parkersburg, (5-year term).

Surgical Section—E. Bennette Henson, Charleston, chairman; W. R. Goff, Parkersburg, secretary.

Eye, Ear, Nose and Throat Section—T. W. Moore, Huntington, chairman; R. A. Tomassene, Wheeling, secretary.

Woman's Auxiliary Officers—President, Mrs. A. G. Rutherford, Welch; First Vice-President, Mrs. W. H. St. Clair, Bluefield; Second Vice-President, Mrs. J. P. Lilly, Morgantown; Secretary, Mrs. C. M. Scott, Bluefield; Treasurer, Mrs. C. A. Ray, Charleston.

Delegates to American Medical Association

1926—James R. Bloss, Huntington; alternate, C. R. Ogden, Clarksburg.

1926-27—H. P. Linsz, Wheeling; alternate, R. A. Ashworth, Moundsville.

PROGRAM

TUESDAY, MAY TWENTY-FIFTH

MORNING

GENERAL SESSION

9:00 CALL TO ORDER

DR. JAMES R. BLOSS, *President*, Huntington

9:05 INVOCATION

REV. W. E. LOWTHER, Morgantown

9:15 "WELCOME TO MORGANTOWN"

MR. W. E. BROOKS, *City Manager*, Morgantown

9:20 "MAKE YOURSELF AT HOME"

DR. S. S. WADE, Morgantown, (Monongalia County Medical Society)

9:25 RESPONSE ON BEHALF OF THE STATE ASSOCIATION

DR. WALTER E. VEST, Huntington

9:30 "GASTROTOMY FOR FOOD OVERDISTENTION"

A single case report of a very unusual nature.

DR. A. P. BUTT, Elkins
DR. GUY L. CROMWELL, Davis

Discussion: DR. H. C. POWELL, Morgantown
DR. E. BENNETTE HENSON, Charleston

10:00 "THE COUNTY SOCIETY SECRETARY"

DR. J. C. IRONS, Dartmoor

1. The important factor the secretary may be in the success of the local society.
2. The need of co-operation on the part of all the members to carry on the work.
3. The facility in conducting the work if all members will be prompt in doing their best.
4. The need of team work by local president, and all committees.
5. No secretary can be efficient unless he has the support of the members.

Discussion: DR. C. H. MAXWELL, Morgantown
MR. STERRETT O. NEALE, Charleston

10:30 "THE DIFFERENTIAL DIAGNOSIS OF ANGINA PECTORIS"

DR. OSCAR B. BIERN, Huntington

Description of disease, overlapping of symptomatology with gall-bladder disease, coronary thrombosis and the vaso-vagal attacks of Gowers. Acute indigestion a misnomer and never a cause of death. Invasion of another medical field by the surgeon with renewed interest of both. Report of three cases of cervical sympathectomy.

Discussion: DR. D. A. MACGREGOR, Wheeling
DR. A. H. HOGE, Bluefield

11:00 "SYMPOSIUM ON GOITRE"

Classification of Goitres.

Differential Diagnosis (Illustrated).

.....DR. D. M. AIKMAN, Wheeling

Surgical Treatment of Goitre.

.....DR. W. R. GOFF, Parkersburg

Types of operative cases. Mortality rate. Preparative preparation; careful examination, functional tests, rest in bed, high caloric diet from stimulating foods and drinks, water, tincture digitalis, Lugol's solution in exophthalmic type only. Anesthesia: Ether, Nitrous oxide, local. Operation: Exposure, amount resected, parathyroids, recurrent laryngeal nerves, hemostasis, drainage. Post operative care; Hematoma, hyperthyroid crises, tetany. Results. Medical care after operation.

The Medical Aspect of Goitre

.....DR. H. L. ROBERTSON, Charleston

12:00 "THE NEW CHOLECYSTOGRAPHY"

.....DR. RALPH HOMER BOICE, Parkersburg

Former methods of roentgen diagnosis of gall-bladder diseases unreliable. Cholecystography as originated by Graham and Cole a diagnostic agent of great value. Comparison of intravenous and oral methods of administration. Roentgen technique—Interpretation of resulting films. Conclusions reached in observation of fifty cases of oral administration of the sodium salt of tetra-iodo-phenol-phthalein. (Illustrated by lantern slides.)

Discussion: DR. C. H. CLOVIS, Wheeling
DR. J. E. WILSON, Clarksburg

12:30 "X-RAY IN SKIN AFFECTIONS, INDICATIONS AND LIMITATIONS"

.....DR. HOWARD T. PHILLIPS, Wheeling

There are certain skin diseases in which the proper application of X-Ray yields brilliant results while in others it fails. Great care must be used in selecting the cases to be rayed and still greater care exercised in applying the rays.
Lantern slides illustrate the type of cases to be rayed as well as result of treatment.

Discussion: DR. W. M. SHEPPE, Wheeling
DR. CHARLES CLOVIS, Wheeling

AFTERNOON

GENERAL SESSION—Continued

3:00 "HOW A FULL TIME HEALTH UNIT IS BENEFICIAL TO THE PRACTICE OF MEDICINE"

.....DR. JOHN THAMES, Kingwood

1. It provides for a health officer, who is not engaged in the practice of medicine and has authority to enforce the Practice of Medicine Act, thereby eliminating unprofessional cults and charlatans.

2. It provides a plan for Health Education that will enlighten people so that they will seek the advice of the physician and appreciate his services.

Discussion: DR. WALTER E. VEST, Huntington
DR. B. S. RANKIN, Tunnelton

3:30 "PERIODIC HEALTH EXAMINATION OF THE APPARENTLY HEALTHY"

DR. ORRIN S. WIGHTMAN, New York City

a. The national scope of the work.
b. Its economic value of the state and the physician.
c. Function is one for the family physician.
d. Advertising should be done by lay organizations and press.
e. To be properly organized:
   1. Findings should be standardized by card index.
   2. Appliances for proper examination should be at hand, and
   3. The physician should know how to use them.

4:00 "PROBLEMS CONFRONTING THE PROFESSION"

DR. SOUTHGATE LEIGH, Norfolk, Virginia

The rapid and comprehensive advances made in Medicine and Surgery during the past few years have thrown increased responsibility on the profession and developed many difficult problems.

a. In the instruction of the medical student how much ground should be covered?
b. How can the general practitioner properly care for his patients under the new order of things?
c. Cannot the "passing of the family physician" be prevented?
d. Are we not drifting dangerously towards State medicine?
e. How can "quackery" be controlled?
f. How can commercialism be prevented?
g. Is surgery being properly looked after and safeguarded?
h. Are we not forgetting many of the good old things in medicine in our haste to adopt new ones?

These and other serious problems are before us and must be worked out in a spirit of justice and honor, and with credit to the medical profession.

EVENING

(Session open to public)

8:00 PRESIDENTIAL ADDRESS

DR. JAMES R. BLOSS, Morgantown

ORATION ON MEDICINE

DR. J. H. J. UPHAM, Columbus, Ohio

ORATION ON SURGERY

DR. C. R. OGDEN, Clarksburg

WEDNESDAY, MAY TWENTY-SIXTH

MORNING

SECTION ON MEDICINE

9:00 "EARLY PULMONARY TUBERCULOSIS"

DR. G. R. MAXWELL, Morgantown

Diagnosis: importance of good clinical history. Differential diagnosis from syphilis, myocarditis, gastric or duodenal ulcer, focal infection, hyperthyroidism, neurasthenia and malaria. Importance of complete physical examination. Findings in the chest on inspection, palpation, auscultation and percussion.
X-Ray and laboratory findings.
Treatment: Rest, fresh air, good food, sunshine, graduated exercises and solution of calcium chloride (1.6%) intravenously.

"THE X-RAY DIAGNOSIS OF PULMONARY TUBERCULOSIS"

DR. WALTER C. SWANN, Huntington

The author takes up the subject more from the standpoint of the clinician, than from the standpoint of the expert roentgenologist, emphasizing the fact that the clinician should acquaint himself with the reading of chest films, because he, with a knowledge of the clinical side of the case, can make a more intelligent interpretation of the X-ray findings.

After reviewing the necessary anatomy and pathology and giving the points of importance seen on the plate, a few slides illustrating the importance of chest films will be shown.

Discussion of preceding papers: DR. R. W. FISHER, Morgantown
DR. WALTER E. VEST, Huntington
DR. E. E. CLOVIS, Wheeling

10:00 "THE MANAGEMENT OF THE SEVERE DIABETIC"

DR. WILLIAM M. SHEPPE, Wheeling

The necessity for the classification of diabetes according to degree of severity in order to evaluate different methods of therapy. Methods in present use for combating acidosis. Necessity for continued and intensive therapy in these cases. An outline is presented for the conduct of these cases beginning with measures directed against the acidosis and passing through a transitory stage to the actual process of desugarization. Instructions to patient preliminary to discharge from the hospital.

Discussion: DR. A. H. HOGE, Bluefield
DR. G. H. BARKSDALE, Charleston

10:30 "ACIDOSIS IN CHILDREN—ITS TREATMENT"

DR. T. M. BARBER, Charleston

The writer feels there is so much of interest in this symptom complex that he is attempting a review of treatment extant. These cases are seen frequently during the year by the family physician and present a serious problem so often that we should know and take advantage of the work done by investigators in the last few years.

Discussion: DR. M. F. PETERSON, Charleston
DR. C. L. HOLLAND, Fairmont

11:00 "TETANY"

DR. W. ROSS MORRIS, Alpoca

Discussion of tetany in general: history, etiology, (to which special emphasis is given), signs and symptoms, differential diagnosis, and treatment. Reports of a case of tetany occurring in a child sick of ilio-colitis, pertussis and broncho-pneumonia, which ended in death, following sub-cutaneous administration of sodium bicarbonate.

Discussion: DR. JOHN T. THORNTON, Wheeling
DR. R. O. ROGERS, Bluefield

11:30 "QUINIDIN: A DIGITALIS SUBSTITUTE"

DR. M. L. BONAR, Morgantown

A review of the experimental evidences which suggest the use and limitations of auricular fibrillation and other heart irregularities: followed by a review of some clinical observations to confirm or modify the conclusions drawn from the experimental evidences.

Discussion: DR. D. A. MACGREGOR, Wheeling
DR. O. B. BIERN, Huntington

12:00 "ACUTE POLIOMYELITIS, CASE REPORTS"

DR. H. A. WALKUP, MacDonald

A rapid review of the salient points of this disease, prevalent in our State, and confronting the general practitioner.
Report of cases occurring in a segregated district. Recovery of a case with unusual amount of paralytic involvement.

Discussion: DR. R. A. ASHWORTH, Moundsville.
DR. M. L. BONAR, Morgantown

12:30 "INFECTIOUS MONONUCLEOSIS"

DR. R. MORRIS WYLIE, Huntington

The occurrence of mononuclear leukocytosis in adults; diseases often confused with infectious mononucleosis; the nomenclature used in the literature; symptoms accompanying; blood picture and types of cells found; etiology of; reports of typical cells; glandular fever and its relation to infectious mononucleosis; relation of acute lymphatic leukemia to; prognosis; conclusions.

Discussion: DR. S. L. CHERRY, Clarksburg.
DR. C. W. WADDELL, Fairmont.

WEDNESDAY, MAY TWENTY-SIXTH

MORNING

SECTION ON SURGERY

9:00 "A CONSIDERATION OF EARLY OPERATION IN DISEASES OF THE BILIARY TRACT"

DR. CHARLES A. GROOMES, Elkins

A brief summary of causes and usual manifestations, available diagnositic and therapeutic measures. Dr. Cheney's classification of various types of cases. Urging more attention to the history, more careful examinations of patients with suggestive history, earlier operation in chronic cases and immediate operation in all acute and urgent abdominal cases.

Discussion: DR. WILLIAM R. GOFF, Parkersburg
DR. A. P. BUTT, Elkins

9:30 "CHOLECYSTECTOMY VS. CHOLECYSTOTOMY"

DR. H. C. POWELL, Morgantown

Relative merits of Cholecystectomy over Cholecystotomy.

1. Comparative end results more favorable following Cholecystectomy.
2. Chronic Cholecystitis or Cholelithiasis not ordinarily relieved by Cholecystotomy.
3. Cholecystectomy—as a prophylaxis of pancreatitis and gall stone formation.
4. The frequency of complications and sequellae following Cholecystectomy are less than those following Cholecystotomy.

Discussion: DR. W. S. FULTON, Wheeling
DR. WADE H. ST. CLAIR, Bluefield

10:00 "INJURIES TO THE HAND"

DR. A. J. RUTHERFORD, Welch

(Synopsis not completed in time for publication.)

"HAND INJURIES AND INFECTIONS"

DR. R. H. WALKER, Charleston

Great economic importance of obtaining complete restoration of function of the injured and infected hand to the wage earner. Treatment of hand injuries and infections, including fractures. Demonstrative lantern slides will be used.

Discussion of preceding papers: DR. R. J. WILKINSON, Huntington
DR. R. A. HAYNES, Clarksburg

11:00 "CARCINOMA OF THE OESOPHAGUS"

DR. B. I. GOLDEN, Elkins

Incidence. Pathology. Symptoms. Causes of failure to make early diagnosis. Expert oesophagoscopy the only means of certain diagnosis in early stage. Cure by radium and deep X-Ray has failed. Surgical intervention so far discouraging. It is possible radium and surgery may do better if diagnosis is made early. Gastrostomy the best palliative, and the earlier performed the more likely it will prolong life. Report of cases.

Discussion: DR. W. S. FULTON, Wheeling
DR. GEORGE C. SCHOOLFIELD, Charleston

11:30 "ESSENTIALS IN FRACTURE REDUCTION"

DR. CHARLES H. CLOVIS, Wheeling

General considerations in fracture reduction: Study of normal joints planes and their relationship to the shafts of long bones. Comparison of normal with changes produced by fractures. Importance of careful radiographic studies to obtain and maintain proper relationship. Functional disorders resulting from poor joint alignment. Lantern slide demonstration.

Discussion: DR. R. J. REED, Wheeling
DR. A. J. RUTHERFORD, Welch

12:00 "SOME PROBLEMS OF MODERN ORTHOPEDIC SURGERY"

DR. WALTER G. STERN, Cleveland, Ohio

This paper will briefly sketch some of the work of an old fashioned orthopedic clinic and then take up a discussion of some of the more recent relationship of orthopedic work to general medical practice. The increased frequency of deformities, due to traumae infections, the treatment of certain fractures and especially the conservative treatment of compound fractures will be discussed. The relation of an orthopedic surgeon to the industrial casualty surgeons and to the industrial and insurance commissions will be briefly outlined.

Discussion: DR. ARTHUR S. JONES, Huntington
DR. JOHN OLIVER RANKIN, Wheeling

WEDNESDAY, MAY TWENTY-SIXTH
MORNING

SECTION ON EYE, EAR, NOSE AND THROAT

9:00 "CONVERGENT STRABISMUS"

DR. J. E. BLAYDES, Bluefield

"MUSCLE EXAMINATIONS IN REFRACTION"

DR. GEORGE K. NUTTING, Hinton

"PARINAUD'S CONJUNCTIVITIS WITH REPORT OF CASE"

DR. M. L. DILLON, Charleston

"A REPORT OF OTOLOGICAL CASES"

DR. H. R. JOHNSON, Fairmont

"EARLY DIAGNOSIS AND TREATMENT OF ACUTE PURULENT OTITIS MEDIA"

DR. IVAN FAWCETT, Wheeling

Early diagnosis assured by routine examination of ears by general practitioner. Ease of such examinations since the advent of the electric otoscope. Encouragement of routine examinations by otologists especially those holding teaching positions. Results of routine otoscopic examinations in the Wheeling district during the past ten years. Steadily diminishing number of cases of chronic purulent otitis media. Treatment: Early incision of the drum followed by massage to open the eustachian tube. Astringent and antiseptic treatments of the naso pharynx.

"NEURITIS OF THE EIGHTH NERVE"

DR. F. O. MARPLE, Huntington

With special reference to diagnosis. The importance of more careful examinations of the acoustic and non-acoustic labyrinth in doing a complete physical examination. Special emphasis placed upon the frequency of neuritis of the acoustic branch of the eighth nerve in syphilitic cases, whose serological and other clinical findings are negative. The importance of after turning nystagmus in syphilis of the central nervous system.

"NEWER METHODS OF HANDLING INFECTIONS OF THE UPPER RESPIRATORY TRACT"

DR. M. F. McCARTHY, Cincinnati, Ohio

Lays emphasis upon the study of the method of infection as a means of possible avoidance of future infection. This includes a survey of the patient's family, and his home living conditions, particularly where there are repeated upper respiratory infections. It stresses the necessity of the realization that one chronic nose in the family may mean a number of chronic nasal infections before many years. It deals in some detail with the prevention of upper respiratory infections, as well as the method of handling convalescent, post-operative upper respiratory infections.

"DIAGNOSIS AND TREATMENT OF LARYNGEAL TUBERCULOSIS"

DR. EDWARD A. LOOPER, Baltimore, Md.

(Lantern slides.) Frequency and severity of laryngeal complications. Importance of early diagnosis. Routine examinations. Dangers of Delay. Objective investigations. Subjective symptoms. Location for early infection. Appearance of lesions. Structures involved. Pathology. Treatment—vocal rest. Electric cautery. Suitable cases. Technique of using cautery. Chemical caustics. Medication. Importance of general treatment. Prognosis.

"TREATMENT OF ACUTE SINUSITIS"

DR. THOMAS E. PEERY, Bluefield

"THE MIDDLE MEATUS IN PARANASAL SINUS DISEASE"

DR. JOHN B. McMURRAY, Washington, Pa.

The middle meatus in paranasal sinus disease is more than a drainage canal for the anterior group of sinuses. In treatment anatomical confirmation should not be disturbed except as a last resort. Polyps occurring in the middle meatus are probably, with very few exceptions, indicative of antral disease. Treatment of the antrum is best accomplished through the middle meatus rather than by puncture in the inferior meatus.

"TORULA INFECTION OF NASO-PHARYNX WITH PRESENTATION OF A CASE"

DR. E. LLOYD JONES, Wheeling

Torula is the name given the pseudo-yeasts which closely resemble the oidiomyces. The case to be reported is of interest because of its rarity, no case of torula infection producing destructive lesions in the nose or throat having thus far been reported in the literature; it shows the possible relationship between a fungus infection of the tonsils and nose to the meningeal and brain cases; this patient has made an apparent recovery, all of the meningeal cases died; there was much difficulty in reaching a diagnosis because of the close resemblance of the lesions of this organism to those of tuberculosis, syphilis and blastomycosis.

AFTERNOON

GENERAL SESSION RESUMED

3:00 "THE TREATMENT OF VOMITING OF PREGNANCY"

DR. PAUL TITUS, Pittsburgh, Pa.

Under appropriate treatment there are only rare cases of vomiting of pregnancy which cannot be promptly relieved, no matter how seriously ill the patient may be; while ordinary "morning sickness" is almost totally unnecessary. Present day treatment is based on the premise that the disturbance in carbohydrate metabolism common to pregnancy underlies and initiates this condition. A detailed outline of the dietetic and therapeutic regime for the treatment of hyperemesis gravidarum is presented by lantern slides. This includes the author's method of treatment by intravenous injections of glucose solution with brief outline of technic of preparation and administration, dosage of glucose, etc. A series of 368 cases (328 previously reported with 40 new cases) is analyzed in respect to type of cases and results of treatment. (Lantern slides.)

3:30 "THE TREATMENT OF ENDOCERVICITIS"

DR. LEO BRADY, Baltimore, Md.

A report of the clinical study carried out for three years on the diagnosis and treatment of endocervicitis. A brief review of the older methods of treating this condition with a comparison of the results thus obtained and the results with methods more recently advocated.

4:00 "BENIGN PROSTATIC HYPERTROPHY WITH CONSIDERATION OF ASSOCIATED CONDITIONS"

DR. VERNE C. HUNT, Rochester, Minnesota

Consideration of prostatic obstruction and associated conditions contributing to the risk of surgical treatment. Discussion of methods of preoperative treatment of associated lesions to decrease risk of surgical procedures. Relationship of preliminary treatment to mortality rate. Discussion of the effects of pre-operative treatment on mortality rate and ultimate functional results.

Discussion: DR. O. D. BARKER, Parkersburg
DR. F. E. ROBERTS, Wheeling

THURSDAY, MAY TWENTY-SIXTH

EVENING SESSION

ANNUAL BANQUET

THURSDAY, MAY TWENTY-SEVENTH

MORNING SESSION

GENERAL SESSION

10:00 "DISCUSSION OF SOME OF THE MORE COMMON COMPLICATIONS IN EAR, NOSE AND THROAT DISEASES"

DR. C. B. WYLIE, Morgantown

The early recognition of the more frequent complications seen in diseases of ear, nose and throat is often of greater importance than the treatment of the initial disease. Realizing their far-reaching effect on the patient, the early application of appropriate measures to successfully combat them should be our earnest endeavor.

Preventive measures early applied are of great value and in the near future will be looked upon, both by the laity and physicians as the correct plan of treatment.

A closer anatomical and physiological study of the relationship of the organs and tissues involved should be our chief aim in order that we may anticipate such complications.

Discussion: DR. C. O. POST, Clarksburg
DR. IVAN FAWCETT, Wheeling

10:30 "TRACHOMA—A PUBLIC HEALTH PROBLEM"

DR. W. C. THOMAS, Huntington

Trachoma is a most widespread disease. The United States has several areas, including West Virginia, badly infected. Poor hygienic conditions favor the spread of the disease.

The prognosis as for preservation of good vision is unfavorable in untreated cases.

Prevention is accomplished by instruction of sufferers and by energetic treatment.

Discussion: DR. C. H. KEESOR, Wheeling
DR. H. R. JOHNSON, Fairmont

11:00 "THE CONSIDERATION OF ACUTE ABDOMINAL PAIN FROM THE STANDPOINT OF THE GENERAL MAN"

DR. P. R. FOX, McComas

A brief review of three acute abdominal conditions; appendicitis, perforated ulcer and acute intestinal obstruction; considered from the standpoint of the general practitioner, giving the character of the pains; accompanying signs and symptoms; a few illustrations from the author's experience, emphasizing the importance of early diagnosis.

Discussion: DR. R. O. ROGERS, Bluefield
DR. C. W. WADDELL, Fairmont

11:30 "OBSTETRICAL COMPLICATIONS"

DR. JAMES A. RIEDY, Monongah

1. Unusually short cord—six inches—and results.
2. Marked cases of sapremia due to closure of internal os.
3. Case of atresia of vagina.
4. Case of concealed hemorrhage.
5. How we deal with incomplete miscarriage.

"OBSTETRICS VIEWED BY A GENERAL PRACTITIONER"

DR. JOSEPH L. MILLER, Thomas

A few practical observations based on twenty-six years of experience. Is the modern instruction in obstetrics the best for the physician who must practice this branch in the small town and country?

Discussion of preceding papers: DR. HUGH MAXWELL, Morgantown
DR. H. H. BOLTON, Pierce
DR. L. H. HOWARD, Fairmont

12:30 "FOCAL INFECTIONS AS AN ETIOLOGICAL FACTOR IN UROLOGICAL DISEASES"

DR. G. G. IRWIN, Charleston

Most of the more common diseases of the urinary tract, viz: pyelonephritis, strictures of the ureter, urinary calculus and cystitis, are due to a combination of focal infection and local trauma. Foci of infection are most commonly found in the teeth, tonsils, prostate, cervix uteri and intestines. Local trauma to the urinary tract results from toxins, ptosis, back-pressure, sexual abuses, etc. The clinical course of such cases is likely to be one of intermittent exacerbations and remissions. Dental examination is of importance only if done properly, otherwise it is misleading. Treatment calls for removal of infectious focus and local measures. Case reports.

Discussion: DR. O. D. BAKER, Parkersburg
DR. T. JUD McBEE, Morgantown

AFTERNOON

GENERAL SESSION CONCLUDED

3:00 "THE TREATMENT OF NEUROSYPHILIS"

DR. J. E. MOORE, Baltimore, Md.

A brief review of standard methods of treatment of neurosyphilis and the results obtainable, illustrated by case reports and lantern slides.
The results obtainable by tryparsamide and malarial therapy will also be discussed.

3:30 "TREATMENT OF VARICOSE VEINS OF THE PELVIS"

DR. MAGNUS A. TATE, Cincinnati, Ohio

Pelvic varicocele (literature—very meager). History, description, anatomy, symptomatology, diagnosis, treatment. (Medical and surgical.)

4:00 "THE DIAGNOSIS AND TREATMENT OF URINARY STASIS"

DR. ALBERT E. GOLDSTEIN, Baltimore, Md.

Stoppage in the upper urinary tract is the principle topic of discussion. The presence of urinary stasis, with symptoms referable to other tracts in spite of negative urinary and roentgenographic findings, is stressed. The diagnosis is made by a new method of visualization of stasis by X-Ray. Finally, the employment of conservative or radical treatment depending upon the degree.

DEMONSTRATION AT THE MEDICAL SCHOOL

Tuesday, Wednesday, Thursday 2:00 to 3:00 P. M.

Departments of Physiology:

1. Povlov Stomachs.
2. Hemisection of Spinal Cord in Dogs.

Department of Anatomy:

1. Dissection of Human Cadaver.
2. Dissection of Normal Female, to illustrate Obstetric and Gynecologic Problems.
3. Normal Female Pelvis.
4. Contracted Female Pelvis.
5. Sections of Brain and Spinal Cord.

Department of Pharmacology:

Demonstrations of Fibrillation on the isolated dog heart.

TENTATIVE PROGRAM
FOR THE
WOMAN'S AUXILIARY

OFFICERS

Mrs. A. G. Rutherford, president, Welch; Mrs. Wade H. St. Clair, first vice-president, Bluefield; Mrs. J. P. Lilly, second vice-president, Morgantown; Mrs. C. A. Ray, treasurer, Charleston; Mrs. C. M. Scott, secretary, Bluefield; Mrs. James R. Bloss, delegate to Woman's Auxiliary of the American Medical Association, Huntington.

Headquarters: Hotel Morgan.

TUESDAY, MAY TWENTY-FIFTH

9:00 a. m to 12:00 noon—Registration

3:00 p. m.—Reception at home of Mr. and Mrs. Frank B. Trotter.

8:00 p. m.—Public meeting of West Virginia State Medical Association in Assembly Room, Elks' Home.

WEDNESDAY, MAY TWENTY-SIXTH

10:00 a. m.—General Sessions open in Hotel Morgan.
Address by First Vice-President.
Report of Secretary.
Report of Treasurer.
Address—"The Object of the Woman's Auxiliary"—Dr. Harry G. Steele, of Bluefield.
Reports of Delegates from county auxiliaries.
Appointment of nominating committee.

1:30 p. m.—Luncheon, main dining room, Hotel Morgan.

6:30 p. m.—Annual banquet of the West Virginia State Medical Association, Hotel Morgan.

THURSDAY, MAY TWENTY-SEVENTH

10:00 a. m.—General sessions resumed.
Unfinished business.
Appointment of committees.
Report of delegate to A. M. A. auxiliary meeting.
Election of officers.

Local Committees of the Monongalia County Medical Society for Entertainment of the West Virginia State Medical Association in Morgantown, May 25, 26 and 27, 1926.

General Arrangements

Dr. C. B. Wylie, chairman; Dr. H. C. Powell, Dr. R. W. Fisher, Dr. Eldon B. Tucker, Dr. E. R. Taylor and Dr. W. C. Moser.

Sub-Committees

Finance—Dr. S. S. Wade, chairman; Dr. W. C. Kelly, Dr. J. P. Lilly, Dr. M. H. Brown, Dr. J. R. Hughart.

Automobiles—Dr. G. R. Maxwell, chairman; Dr. L. W. Cobun, Dr. F. P. Coombs, Dr. G. W. Phillips.

Meeting Halls—Dr. C. H. Maxwell, chairman; Dr. R. H. Edmondson, Dr. C. B. Wylie.

Scientific Exhibits—Dr. T. J. McBee, chairman; Dr. R. H. Edmondson, Dr. F. H. Sisler.

Commercial Exhibits—Dr. C. B. Wylie, chairman; Dr. H. C. Powell, Dr. W. C. Moser.

Badges—Dr. E. B. Tucker, chairman; Dr. E. F. Heiskel, Dr. A. E. Smith, Dr. S. F. Talbot.

Hotels—Dr. E. R. Taylor, chairman; Dr. B. C. John, Dr. C. F. Boyers, Dr. H. V. King.

Reception—Dr. J. N. Simpson, chairman; Dr. C. R. Kessel, Dr. C. H. Maxwell, Dr. S. S. Wade.

Entertainment—Dr. R. W. Fisher, chairman; Dr. B. M. Stout, Dr. S. J. Morris, Dr. W. C. Moser.

Golf Tournament, etc.—Dr. B. M. Stout, chairman; Dr. H. V. King, Dr. B. C. John, Dr. W. B. Scherr, Dr. E. R. Taylor, Dr. F. T. Scanlon.

Publicity—Dr. H. C. Powell, chairman; Dr. W. B. Scherr, Dr. D. M. Pfost, Dr. F. T. Scanlon, Dr. R. C. Price.

Ladies' Reception and Entertainment—Mrs. S. J. Morris, chairman; Mrs. F. T. Scanlon, Mrs. B. M. Stout.

Members of the House of Delegates

The following members of the House of Delegates for the fifty-ninth annual meeting have had their credentials certified to the executive secretary as of April 15, 1926:

Barbour-Randolph-Tucker — Delegates, J. C. Irons, Dartmoor; B. I. Golden, Elkins; alternates, S. G. Moore, Elkins; C. B. Williams, Philippi.

Brooke County—Delegate, F. L. Matson, Wellsburg; alternates—None reported.

Cabell County—Delegates, C. G. Willis, Huntington. None other reported; alternates —None reported.

Central West Virginia—Delegates, H. S. Brown, Sutton; Hugh Dunn, Richwood; alternates—None reported.

Doddridge County—Delegate, A. Poole, West Union; alternates—None reported.

Eastern Panhandle — Delegates, Victor Clover, Martinsburg; J. A. Duff, Martinsburg; alternate— G. P. Morrison, Martinsburg.

Fayette County—Delegates, H. C. Skaggs, Montgomery; W. R. Laird, Jr., Montgomery; H. A. Walkup, MacDonald; alternates—None reported.

Grant-Hardy-Hampshire-Mineral — Delegates, V. L. Dyer, Petersburg; A. A. Scherr, Keyser; alternates—None reported.

Greenbrier Valley—Delegates, C. F. Mahood, Alderson; D. G. Preston, Lewisburg; alternates—None reported.

Hancock County—Delegates, F. B. Harrington, Weirton; alternates — None reported.

Harrison County—Delegates, C. O. Post, Clarksburg; I. D. Cole, Clarksburg, L. C. Goff, Clarksburg; alternates—R. C. Hood, Clarksburg; E. F. Wehner, Clarksburg.

Kanawha County—Delegates, T. M. Barber, Charleston; H. H. Howell, Danville; F. P. Weltner, Charleston; R. A. Ireland, Charleston; J. R. Shultz, Charleston; L. L. Aultz, Charleston; alternates—A. A. Shawkey, Charleston; R. H. Walker, Charleston; M. L. Dillon, Charleston; G. H. Barksdale, Charleston; G. P. Fisher, Kayford.

Lewis County—Delegates, O. L. Hudkins, Weston; S. H. Burton, Weston; alternate—E. T. W. Hall, Weston.

Parkersburg Academy—Delegates, R. H. Paden, Parkersburg; J. T. Goff, Parkersburg; R. H. Boice, Parkersburg; alternates

—M. R. Stone, Parkersburg; Paul Starkey, Ravenswood.

Logan County—Delegates, C. A. Davis, Logan; S. B. Lawson, Logan; E. R. Logan, Logan; alternates—E. B. Thompson, Ethel; R. S. VanMetre, Logan.

Marion County—Delegates, G. H. Traugh, Fairmont; C. L. Parks, Fairmont; G. V. Morgan, Fairmont; P. F. Prioleau, Fairmont; alternates—L. D. Morris, Fairmont; J. B. Clinton, Fairmont; L. B. Boyers, Fairmont.

Marshall County—Delegates, W. B. Hartwig, Benwood; C. S. Fortney, Hundred; W. P. Bonar, Moundsville; alternates—J. C. Peck, Moundsville; P. D. Barlow, McMechen.

McDowell County—Delegates, L. E. Cox, Mohawk; H. G. Camper, Welch; W. B. Stevens, Eckman; alternates—G. L. Straub, Welch; E. E. Vermillion, Welch.

Mercer County—Delegates, H. G. Steele, Bluefield; John H. Bird, Rock; W. W. Harloe, Matoaka; A. H. Hoge, Bluefield; alternates—W. W. Wallingford, Princeton; B. S. Clements, Mataoka; H. B. Luttrell, Bramwell.

Mingo County — Delegates, Fred Ben Quincy, Williamson; Henry Clay Hays, Williamson; alternate—G. B. Irvine, Williamson.

Monongalia County — Delegates, G. R. Maxwell, C. B. Wylie, E. R. Taylor; alternate —W. B. Scherr, all of Morgantown.

Ohio County—Delegates, J. G. Thoner, Wheeling; alternates—None reported.

Preston County—Delegate, John Thames, Kingwood; W. A. Welton, Terra Alta.

Raleigh County—Delegates, Kyle M. Jarrell, Beckley; B. B. Richmond, Cranberry; M. S. Doak, Price Hill; alternates—D. B. Jarrell, Beckley; E. H. Hedrick, Beckley.

Summers County—Delegates, R. G. Broaddus, Hinton; H. F. Bigony, Hinton; alternate—Geeorge K. Nutting, Hinton.

Taylor County—Delegates, Paul P. Warden, Grafton; alternates—None reported.

Upshur County—Delegates, Everett Walker, Adrian; alternates—None reported.

REPORTS FROM COMPONENT SOCIETIES

Ohio County

The Wheeling Intelligencer of recent date had a long editorial on the growing famine of doctors of medicine in the rural districts. Among other things, it was inclined to think that ours was becoming a profession that only the rich young man could enter. Why worry? The newspapers are so full of wonderful cures performed by irregular practitioners who, as a rule, have undergone very little training that arrangements might be made to send them out in the rural and mining districts instead of allowing them to sit in offices in big buildings in the city with hours from 9 a. m. to 5 p. m., and see how wonderful they might be going against the tide of instrumental deliveries, fractured bones, and the infectious diseases fourteen hours a day.

Dr. Howard T. Phillips is becoming a regular actor with a change of bill regularly. He delivered a very comprehensive lecture on the "Differential Diagnosis of Syphilis and Other Skin Diseases," at the recent meeting of the staff of the Ohio Valley General Hospital on Tuesday night, April 13th; then delivered another on "The X-ray in Skin Diseases," at Wheeling Hospital at their staff meeting, April 14th. Far be it from us to "blow the horn" for one of our own, but if any society in the state is under the impression that they should go outside of West Virginia for a good, practical lecture on the skin or syphilis, this is written to offer a correction.

Many men here are planning to go to Morgantown for the state meeting. If one-half of them go it will be a good crowd. Seldom have we seen so much enthusiasm. It is an easy drive from here over good roads. Train service is good, so we predict a good gathering. Great confidence is shown in the University City to put up a satisfactory program. So on to Morgantown!

Kanawha Medical Society
(Kanawha-Clay-Putnam-Boone)

The Kanawha Medical Society met at the Kanawha Hotel Assembly Room on April 6, 1926.

Dr. E. B. Henson read a very well-prepared paper on diseases of the bone, and showed a series of diagrams and X-ray pictures on the lantern screen.

The president appointed a committee of three to act as a Medical Milk Commission for the district of this society. This committee will act under the supervision of the National Commission.

Delegates to the state meetings at Morgantown in May were elected as follows: H. H. Howell, Madison; F. P. Weltner, Charleston; T. M. Barber, Charleston; R. A. Ireland, Charleston. Alternates: A. A. Shawkey, R. A. Walker, M. L. Dillon, G. H. Barksdale.

The society decided to give a dinner at the Kanawha Hotel at our next meeting night, April 20, to include the wives of members so that the ladies may organize the County branch of the State Woman's Auxiliary.

Announcement was made of a plan put forward by the Harrison County Medical Society to levy a 10 per cent tax on all tobacco sold in the state in order to raise funds for the care of tuberculosis cases in West Virginia. The society approved this plan and a committee was formed to act with the Harrison County committee.

This society announces with deepest regret the death of Dr. W. F. Shirkey, Sr., long an active and honored member of our profession and well loved by us all. His son, also a member of our society, may feel assured we share in his loss.

Before adjournment, the applications of five new men for membership were read and announcement was made of transfer of Dr. Bankhead Banks from the Greenbrier Valley Medical Society to the Kanawha Medical Society.

At the April 20th meeting of the Kanawha Medical Society a dinner was given at the Kanawha Hotel Rotary room to include the wives of members of the society.

Dr. J. W. Moore interested all of us by his vivid description of his work and the medical situation in China of today. The high medical standards set up there by the Western organizations are matters of pride to the medical profession.

Following Dr. Moore's talk the ladies withdrew and organized the County branch of the Woman's Auxiliary of West Virginia State Medical Association. This organization invites all the wives of members of the Kanawha Medical Society to become members.

Dr. G. H. Barksdale gave the scientific paper of the evening, entitled "Chronic Nephritis, Its Classification and Treatment." This is easily one of the most instructive papers read this year. The author attempted to give us a simple working classification, and assembled diet in a form that one can handle with a fair idea of accuracy in correlating food constituents with patients' need and ability to take care of them.

During the business session, five new members were elected. Dr. D. N. Barber, Widen, Clay County, graduate of Harvard Medical School; Dr. R. T. Engenbright, Kam, Boone County, graduate of University of Virginia; Dr. T. A. McDonald, Van, Boone County, graduate of University of Toronto, Canada; Dr. F. G. Prather, Barrett, Boone County, graduate of University of Maryland; Dr. W. E. Taylor, Mammoth, Kanawha Co, graduate of University of Louisville.

To complete our quota of delegates to the State meeting at Morgantown, the following delegates were elected, Dr. J. R. Shultz and Dr. L. L. Aultz of Charleston, and as alternates, Dr. Fisher was added to the alternates already chosen.

T. M. BARBER, SEC.

———o———

Greenbrier Valley

At a meeting of the Greenbrier Medical Society, held at Lewisburg, W. Va., April 10, the following officers were elected: D. G. Preston, Lewisburg, president; C. F. Mahood, Alderson, secretary-treasurer; D. G. Preston and N. R. Price of Marlinton, were elected as delegates to the State Medical

Association, to be held at Morgantown, May 25 to 27, 1926.

Dr. W. P. Fawcett of Alderson, for some 20 years an active member in our society and now partially incapacitated owing to declining health, was elected to honorary membership in our society.

The Greenbrier Valley Medical Association embraces the counties of Greenbrier, Monroe and Pocahontas, and at this time we have only a paid-up membership of 17, while in the counties mentioned there are 58 or 60 physicians in active practice. It is the intention of the present officers, with the assistance of all its members to make a better showing during the present year for a larger membership.

C. F. MHAOOD, *Sec.*

STATE AND GENERAL NEWS NOTES

EVERYTHING IN READINESS FOR FIFTY-NINTH ANNUAL MEETING IN MORGANTOWN

Plans have been perfected for the fifty-ninth annual meeting to be held in Morgantown, May 25, 26 and 27 and every indication points to its being one of the most successful in history of the association. The virtually completed program with announcements and other information is published in this issue of *The Journal.*

Anticipating a large attendance, the publicity committee of which Dr. H. C. Powell of Morgantown, is chairman, has broadcast the following invitations to members of the profession:

"Morgantown, the New Convention City of West Virginia, extends to you a most cordial invitation to attend the State Medical Association meeting, to be held here May 25-26-27.

"For a number of years Morgantown, realizing its limitations in the way of hotel and assembly facilities has kept silent when invitations were being extended State Conventions. But now, with the completion of the new Hotel Morgan and the Elk's home (in the Assembly Room of which this convention will be held) we feel we are able to care for you in a manner that will be satisfactory to both you and us.

"We know you have a desire to visit our City and West Virginia University and right now is a wonderful chance to combine that visit with your attendance at the State Convention.

"The local Committee in charge of arrangements assures you that we are using every effort possible to make this Convention the BEST and LARGEST in the history of the State Association. Your attendance will be of great assistance.

"Right now is a good time to drop us a line saying 'count on me' and to tell us what we may do for you in the manner of accommodations or anything else that will help make your visit one of pleasure, as well as profit."

For the benefit of the entire membership, the hotels committee of which Dr. E. R. Taylor of Morgantown, is chairman, has submitted the following information:

"There will be ample hotel accommodations for all unless there is an unprecedented attendance.

"The Morgan Hotel with one hundred and fifty rooms can make reservations for approximately two hundred guests. Their rates are $3.00 (single) and $5.00 (double).

"The Peabody Hotel with sixty rooms can make reservations for at least fifty guests. Their rates are $1.00 and $2.50 for rooms with running water only, and $2.50 and $3.50 for rooms with bath.

"The Madeira Hotel with eighty rooms can make reservations for at least seventy-five guests. Their rates are $1.50 and $2.50 with running water only, and $2.50 and $4.00 with bath.

"All these hotels will make reservations direct to those expecting to attend this meeting, but if any of the members so desire, the local Hotels Committee will be glad to

attend to the matter of reservations for them."

That the number of visitors to Morgantown during convention week will approximate from four to five hundred seems very likely and therefore, it is important that reservations be made at the earliest possible day. The executive secretary visited Morgantown the latter part of April and found reservations in Hotel Morgan, the headquarters hotel, being taken up rapidly. This hotel virtually will be taken over by the medical profession.

The principal entertainment features will be a golf tournament to be held May 24 on the Morgantown Country Club course and a dinner, to be followed by a dance, will be given the night of Wednesday, May 26, in Hotel Morgan's spacious ball room.

Attendance this year is expected to be swelled largely by the second annual meeting of the woman's auxiliary of the state association which will hold separate sessions during the three days. A rather elaborate entertainment program has been arranged for visiting ladies, including a reception Tuesday afternoon, May 25, at the residence of Mr. and Mrs. Frank B. Trotter; an auto ride Wednesday morning; a luncheon Wednesday at 1:30 p. m., in Hotel Morgan.

Any information relative to the meeting will be supplied by Dr. C. B. Wylie of Morgantown, chairman of the general arrangements committee.

———o———

M. D. CURE APPOINTED WESTON HOSPITAL CHIEF

Dr. Mortimer D. Cure, United States army medical officer, West Virginia physician of 25 years experience, county health officer and student of nervous and mental diseases, was named superintendent of Weston State hospital April 5 by Governor Gore. This announcement followed a conference at the governor's office to which the governor is said to have invited the appointee and the members of the state board of control. Dr. Cure is understood to be the unanimous choice of the state officials.

He is appointed to serve at the will and pleasure of the governor and will assume his new duties May 1.

Mrs. Agnes G. Cure, his wife, is a graduate nurse of Maryland general hospital, Baltimore, Md., with a year's experience as head surgical nurse of that institution. She is also a domestic science graduate.

Dr. Cure, who succeeds Dr. Cecil Denham as superintendent of Weston State hospital, is a graduate of Baltimore Medical college, Baltimore, Md., having had one year interneship and an additional year as resident physician at Maryland General hospital, Baltimore. He also did special work under the late Dr. Charles G. Hill, Mt. Hope sanitarium, Baltimore, in nervous and mental diseases.

The new appointee came to Lewis county West Virginia in 1902 and has practiced in Weston since 1904. During this time he has served 14 years as county health officer, delegate to the national chamber of commerce, surgeon for Baltimore and Ohio Railroad company, the Hope Natural Gas company and Reserve Natural Gas company. He is a member and former president of the Lewis county medical society, also holding membership in the State Medical society, the Southern Medical society and American Medical association, and is active in the professional and business organizations with which he is identified.

———o———

COMPENSATION OFFICIAL URGES PHOTOS BE MARKED

A request that all members of the medical profession use the utmost care in sending X-ray photographs to the Workmen's Compensation department was voiced recently by Chief Clerk Graham, of the claims department. It is important that each photograph be marked with the name of the injured employee, the date of his or her injury, the name of the employer as well as the name of the doctor, hospital or X-ray technician making the report.

"One of the most confusing problems we have to solve," said Mr. Graham, "is to fit X-ray photographs to reports where no identification marks are attached. Often a hospital will send in a whole roll of pictures

without a single mark except the name of the hospital on the wrapper. Then we attempt to fit the pictures to cases we have pending from that particular vicinity, but this often is a long and tedious experience.

"Some of the pictures are never matched with case reports and of course the department often must disallow X-ray charges because of this fact.

"If the medical profession will cooperate in marking all X-ray pictures clearly and properly, it will expedite the payment of your fees, relieve us of considerable hard and tedious work with the outcome in doubt and it will prove valuable assistance."

Mr. Graham also pointed out that pictures must accompany all claims for fees for X-ray service—and all pictures must be marked.

———o———

DEATHS

Dr. W. F. Shirkey, one of the best known local physicians, with practicing experience in Charleston, Malden and Jarrett's Ford, at different times, member of an old and prominent Kanawha county family, active in public affairs during his residence in Charleston, part of the time as member of the city council, died March 29 at his home, 402 Columbia Boulevard. He was past 68 years of age and had been ill several months, due primarily to heart disease. Funeral services were conducted March 31 in Central Methodist Episcopal church, of which he was a member and official.

W. F. Shirkey

Wilbur F. Shirkey was born on the Shirkey farm near Sissonville, son of the late John C. and Martha Matheny Shirkey, but was reared in Elk district, where his father bought a farm along Elk river and moved his family when the future physician was a mere child.

The Shirkey family was established in Kanawha county by the doctor's grandfather, David Shirkey, who came from Virginia, son of a native of Ireland, who had come over and settled in Virginia in pioneer days, along about 1790. Both the father and the mother of Dr. Shirkey were life-long residents of Kanawha county. The father, John G. Shirkey, was born in Poca district in 1832 and died on his Elk river farm in 1887. The mother, previous to her marriage, was Miss Martha Matheny, of Pinch.

The future Dr. Shirkey attended the neighborhood school in Elk district, later Carbondale academy, attended medical lectures at the College of Physicians and Surgeons, Baltimore, Md., first located for tentative practice at Jarrett's Ford, Elk district, later returned to medical college and graduated in 1894. Subsequently he took post graduate courses at New York Polyclinic and Chicago Post Graduate colleges. In 1890 he located and practiced his profession at Jarrett's Ford, until he finally established himself in Charleston.

Dr. Shirkey was married April 14, 1881, to Miss Sarah Woody, who survives, with five children: Dr. W. F. Shirkey, Jr., who has been associated with his father in the practice of medicine, with offices in the Peoples Exchange bank building; Mrs. M. I. Jackson, of Ward; Sydney F., and Misses Ethel and Wilma Shirkey, in Charleston. He also leaves a brother, Sherman Shirkey, of Stone Cliff, and a sister, Mrs. George Quick, of Charleston. One of his brothers, the late David W. Shirkey, was a practicing attorney in Charleston at the time of his death a few years ago. Dr. Shirkey moved to Charleston from Malden about 13 years ago. He has been a member of the county Republican committee, otherwise active in party politics, a member of the Charleston city council, a member of the Masonic orders, a Shriner, and at Malden was affiliated with the Order of Red Men.

Dr. Shirkey had been president of the county medical society, vice president of the state medical society, chairman of the county Republican executive committee, councilman-

at-large four years during the mayoralty administration of Grant P. Hall, active member of Central M. E. Church, worshipful master of the Masonic lodge at Malden, a Knight Templar, and a Shriner. The old family home up Elk river was at Pinch.

Active pallbearers at the funeral were: W. H. O'Dell, O. Emerson Camp, W. H. Goodwin, J. M. Life, W. P. Gore and Samuel McDowell.

Honorary pallbearers were: Mayor Wertz, John E. Thompson, Wilbur Norton, Mose Putney, I. J. Stanley Joe Robson, Dr. R. H. Walker, Dr. T. H. Barksdale, Dr. C. A. Ray, B. S. Quick, Bonner Hill, M. J. Simms, Peter Silman and Lawrence Christy.

———o———

BOOK REVIEWS

FACTS ON THE HEART BY DR. RICHARD C. CABOT

Anything that Dr. Cabot has to say, whether in the realm of ethics or medicine, is interesting. But when Dr. Cabot speaks on the heart it commands the attention of the entire medical profession. In his book, "Facts on the Heart," Dr. Cabot sets out to show what is worth while in the analysis of symptoms and signs elicited in the study of the patient, and then evaluates those signs and symptoms from the standpoint of anatomic investigation, namely post-mortem study.

Those of us who had the opportunity of being associated with Dr. Cabot and to study the methods used in teaching at Massachusetts General Hospital know the high standard of the work done and for this reason every conclusion arrived in the making of a diagnosis has been arrived after painstaking examination.

The book is based upon 1906 necropsied cases covering all the cardiovascular material in 4000 cases at Mass. General Hospital. The chapters are so arranged that the signs and symptoms of the disease are taken up first, the important feature emphasized and these points then proven by citing cases with discussion of clinical findings and post-mortem evidence.

Some statements in the book are interesting, Cabot states that most heart disease as complained of by the patient is imaginary. Seventy-seven per cent of all heart disease is due to simple hypertrophy and dilatation of the heart without any valve lesion and is due to hypertension.

His classification of heart disease into those due to chronic infection (Rheumatism and syphilis) acute infection (Pericarditis, endocarditis) degeneration (Arteriosclerosis) and congenital lesion is very simple.

The article on luetic aortisis is very interesting; he states that it is rare for any patient with symptoms from aortitis to live longer than two years.

As a whole, the book is full of clinical meat and should prove invaluable to the general practitioner. —M. I. M.

———o———

A third edition of Gould & Pyle's Cyclopedia of Medicine and Surgery, published by P. Blakiston's Son & Co., Philadelphia, is just out and like former editions it is up-to-date and contains many good suggestions, conveniently arranged and adapted for a busy practitioner. It should be a wonderful aid to the country doctor who has to do much of his readings on the run. —C. A. R.

———o———

"HEADACHE"—(*P. Blakiston's Sons*, Philadelphia, Pa.—$3.00). This is a splendid little book by Dr. Thomas F. Reilly, of New York. He divides headaches into toxic, reflex and mechanical, according to cause. A scheme for diagnosis and a chapter on general principles of treatment are two of its admirable features. The chapter on migration, several pages of which are devoted to its etiology, is like all previous writers, theoretical, but his reasoning from his idea is rather convincing.

On the whole, it is a very commendable little book, which gives many good points on a subject confronting us every day among all classes of people.

* * *

P. Blakiston's & Sons Co., Philadelphia, have recently off the press, a sixth revised edition of Greene's "Medical Diagnosis"

The text is well written and up-to-date, and conveniently arranged. The symptom index fused with the general index and marginal notes of references and suggestions make it easy and convenient for the busy practitioner to look up a case hurridly. The series cardiograms and polygrams are among the best we have seen. There are fourteen colored plates and 709 text illustrations, those on the heart being exceptionally good. The type is plain and the paper of best quality, making it easy to read. All of the 1468 pages are filled with modern ideas on the subject, and the book is well worth the price of $12.00.

———o———

GARVAN LEADS FIGHT ON COMMON COLD

A research to discover the cause and a cure for the common cold, which was pronounced one of the greatest scourges of humanity, was undertaken by the American Drug Manufacturers' Association at its convention in New York City recently, when an offer to finance such a research was made by Francis P. Garvan, president of the Chemical Foundation.

Reporting good progress in the fight to establish the chemical industry in this country in competition with Germany in the fields which Germany formerly controlled, Mr. Garvan branched into the subject of the common cold, which he said was one of the greatest causes of mortality and economic loss, in spite of the fact that it is usually regarded as of slight importance. He said:

"Sitting at my desk, it seems to me as if a new industry was born in this country every minute, fathered by chemistry and mothered by research. But recently, in my pride and boasting of our achievements, the curtain lifted over something undone, a problem I have brought to you and which has, I might almost say, overwhelmed me in its importance and in the little that has been done with it. This is the subject of the common cold.

"When you come to consider that all through our lives we go on suffering from a cold and pneumonia, from mastoiditis and the sinus troubles, and a thousand and one things which develop out of the common cold, to say nothing of the inherent weakening of the physical structure by these repeated assaults upon ourselves but more particularly upon our children and our women, you realize the gravity of the common cold.

"Do you realize that ten days of every man, woman and child's activity a year, on the average, are lost throughout this country? It amounts to more than a million years of activity annually. The loss to agriculture, industry and all business activities is some 700,000 years of working time through the incapacitation of 15,000,000 workers in this country."

The American Drug Manufacturers' Association voted to cooperate with the Chemical Foundation in seeking a method to check the ravages of colds.

———o———

THIS EDITOR PRAISES MEDICAL PROFESSION

The following lead editorial in the Charleston (W. Va.) *Mail* of Tuesday, April 6, will be of interest:

"We suppose that ever since man discovered that his body was subject to ills he has been seeking a cure for them, and especially a cure for those diseases which were mysterious before the beneficial discoveries of modern science, which, if it has not always found a perfect cure, has at least discovered remedies or preventives that vastly decrease the dangers and that in many cases come near to eliminating the disease itself.

"We have only to look to what has been accomplished in practically eradicating smallpox as a great scourge of the human race, how yellow fever has been practically eliminated, and how typhoid has been almost conquered, how diphtheria, while still not something to be despised, has been robbed of its former terrors, and how other diseases before which mankind was practically helpless have been rendered far less destructive, thus leading to the hope that they too, in turn, will practically be banished.

"One great dreaded foe of the human race has remained, and this is pneumonia. The announcement by a number of reputable Minneapolis physicians that they have discov-

ered an antitoxin which, it is hoped and believed, will be a cure for pneumonia, in view of what has been accomplished with respect to other diseases, does inspire hope that even this dreaded disease will be robbed of at least the major part of its terrors."

The editor *of The Mail* has endorsed scientific medicine consistently in years gone by and with such cooperation from the press, much can be accomplished in the preventive medicine campaign.

———o———

DR. HANNAH CANDIDATE FOR STATE SENATOR

Dr. U. H. Hannah of Cass, Pocahontas county, member of the Greenbrier Valley Medical Society and widely known in the medical profession in West Virginia, has announced his intention of becoming a candidate for the nomination for state senator in the Tenth district which is composed of Braxton, Calhoun, Gilmer, Pocahontas and Webster counties. Nomination in this district on the Democratic ticket is virtually the equivalent of election. Dr. Hannah is a public spirited man with considerable experience in governmental affairs. Besides standing high in the medical profession he has quite a reputation in Pocahontas county as a farmer and stock raiser.

With Dr. Hannah in the senate, public health policies will have a staunch friend and earnest supporter. The Tenth district is one of the rural sections whose people, it is believed, have been "Kidded" about long enough and it is hoped that every person interested in the health of our public who has friends or acquaintances in the district will take an interest in the coming primary.

Senator A. C. Herold is the retiring senator from the district. He made an enviable record in 1923 and 1925 but he has not made up his mind, friends say, as to his future political ambitions. Two years ago he was an outstanding gubernatorial possibility but yielded to his fellow townsman, Jake Fisher. Senator Herold voted consistently with those stalwart legislators who fought for proper health legislation.

OHIO MEETING SOON

The eightieth annual meeting of the Ohio State Medical Association is to be conducted in Toledo May 11, 12 and 13.

———o———

DELAYED JUSTICE

From Boston Medical and Surgical Journal

In the *Evening Transcript* of April 9 was a long account from London of the death of Dr. F. W. Axham who in 1912 was deprived of his license by the Royal College of Physicians of Edinburgh. His offense had been that as anaesthetist he had assisted an osteopath, Herbert Barker, who was later knighted for his services.

On January 19, 1926, the college voted to remove the suspension and return the diploma to Dr. Axham. Unfortunately he died before the General Medical Council had taken final action in the matter.

Thus for a moment is revived the memory of an incident which attracted considerable attention at the time and which permitted George Bernard Shaw to vent his sarcasm on the medical profession.

Fortunately such occurrences as this become less common as knowledge and tolerance increase. It may be a little comfort to realize that much worse sins have been committed in the name of Christianity than in the maintenance of medical ethics. The futility of such ostracism is obvious because the public does not understand and will not sympathize with the objects of those who attempt thus to maintain professional standards. The public considers the martyrdom of a man who embraces new ideas. No matter how false these ideas may be they gain ground as they could in no other way.

Education and time are the only remedies which overcome false doctrines. Fraud, however, cannot be treated so leniently.

Medical organizations are called upon to deal with questions of ethics which are not strictly subject to the provision of the statutes and endeavor to analyze motives and effects with the purpose of administering justice without doing harm to individuals or society at large. All differences of opinion should be given generous consideration.

Criminal acts or gross departure from moral standards must be dealt with by boards or officials clothed with more definite authority. In this commonwealth we are perhaps too much inclined to depend on the legal authorities.

It is the difficult task of the board of registration in medicine to check dishonesty without injustice to the honest fanatic and yet prevent harm to the public through the unwise activities of mistaken enthusiasts. In the decisions of the board sectarianism has no place. Adequate knowledge and the honest conscientious application of that knowledge are the sole criteria. One standard of fitness for all is the only safe basis for registration.

———o———

ABUSE OF CHARITY SERVICE IS PROBLEM

There are two classes of men who are natural prey for everyone who has a mind to shirk their moral responsibilities—the clergy and the doctors. The reason is not hard to find. It is because there is ingrained in these two professions the sense of public service so deep that no appeal goes unanswered.

There is no complaint from the medical profession about the genuine poor. The average physician does not even consider the deserving poor as a burden.

However, when a patient cries "poverty" but manages somehow to stir up enough money for a "lark" when he recovers, the doctor feels, and rightly so, that he has been "stung."

Clinics are set up for the purpose of giving to the poor the opportunity to secure the best medical advice available. These clinics are now for the most part overcrowded with the result that those who seek aid are not always able to secure the medical attendant's attention long enough.

These free dispensaries or clinics should be so regulated that a patient had to disclose his financial status in such a way that it could be easily checked. It is perhaps unkind to make the truly poor disclose their poverty but such an action would be kindness to the poor.

Those who could pay would then be made to pay and it would not take long for the word to go around that abuse of this charity was not being tolerated.

On the other hand, action of that kind must be tactful. It would not be well to have it worded about that the dispensary was making everyone pay or was prying too much into personal affairs.—*Medical Economics.*

———o———

ROADS TO MORGANTOWN WILL BE GOOD, REPORT

Information obtained from the state road department at the last minute indicated that highways leading to Morgantown will be in good condition in time for the annual meeting.

Members from Mercer and McDowell counties, because of construction work in the Spanishburg area, may drive to Welch, Davy, thence to Oceana, to Stallings and Madison. From the latter point, the route is direct to Charleston.

All other motorists in the southern section east of Charleston may likewise find good roads to the capitol city.

From Charleston, the route lies west to Huntington, thence across the river and north to Belpre, Ohio. Crossing the bridge at Parkersburg, a permanent road lies eastward toward Clarksburg with the exception of one 15-mile detour. A hard road connects Clarksburg, Fairmont and Morgantown.

Members from Mingo county have a good road direct to Huntington, thence they may travel over the route shown above.

Last minute information will be obtained from the road department and members wishing these reports may write to the executive secretary, Box 1541, Charleston.

———o———

"QUAKES OF QUACKERY" SUBJECT OF EDITORIAL

A number of cities—notably Chicago and New York—have inaugurated campaigns to rid themselves of quacks. The Chicago campaign was spectacular and effective; the New York movement promises to be no less so.

A New York clergyman, backing the Webb-Loomis bill, aimed at curbing the activities of medical quacks, recently averred that the public should fear quacks more than thieves, and declared that the Eastern metropolis

contains more than 2,500 of these unlicensed practitioners.

Criminal doctors are a menace to society. They reap rich harvests. They delude many. They are responsible for many deaths. They apparently are conscienceless. Disguised as messengers and apostles of health, they work the trade of banditry only from another angle. They prey upon sick people, taking their money and giving them nothing.

The protection of human life is a sacred duty. The accredited physician of today is humanity's best friend. The human body is responding to the wise direction and control of enlightened science in the hands of the surgeon and the men of medicine.

Health is being conserved and life prolonged. The day of talismans, signs, omens, philters, powders and incantations, with all its mummery of medical assumption, was a sad day for the race, and a long one. It lies behind the present age except as represented by the psychic mummers, the quack brigades and the purveyors of "roots and yarbs," traditionally specific for all the ills that flesh is heir to.

Every city is infested with these parasites, who prey upon the public for pelf. There are men and women quacks. They should all be made not only to quake, but to quit their nefarious business. The public health is a thing too vitally precious and important to be subjected to the venal practices and designs of those who know less of medicine and the healing of bodies than they know of manipulating the foibles and follies of ailing people, to their personal profit.—*Cincinnati Enquirer.*

———o———

VIRGINIAN IS FIGHTING FEDERAL AID PROGRAM

Representative Tucker of Virginia, is fearful that people may begin calling Uncle Sam names * * * * unless something shall be done to save the kindly and normally dignified genius of the republic from the machinations of the swelling army of bureaucraters.

According to Representative Tucker, allowance of the $1,000,000 for hygienic, maternity and infancy work under the Sheppard-Towner maternity act, as proposed in the pending Department of Labor appropriation bill, will make Uncle Sam "the midwife for expectant mothers and the wet nurse for the nation's babies."

The Virginia statesman attacks the entire Federal aid system as unconstitutional and illegal and as a dangerous usurpation of individual state rights and responsibilities.

"This is state socialism," declared Mr. Tucker in his convincing argument against the proposed appropriation. "I am against any Government appropriation of money for any function which properly belongs to the individual states."

In commenting on Representative Tucker's correct attitude in this matter, a recent editorial in a leading publication declared:

"Part of that $1,000,000 might go for talcum powder, safety pins, etc., but the states should be quite able to furnish such things and to provide authority to the mammas of the little dear babies to smack 'em if they refuse to be good.

"This is state socialism, and the backers and promoters of paternal socialism grow bolder and more persistent. The maternity act is an extreme illustration of the malevolent tendency in this direction, but the tendency is manifest in a thousand directions, as, for example, the creation of a Federal educational department, under a cabinet secretary."

Concerning this latest proposal of the bureaucratic urge, Senator Edwards the other day said:

"Little by little the national government has been encroaching upon state rights. It is time to call a halt, and defeat of the Curtis-Reed bill is a good beginning. All students, regardless of their intelligence or ability, should not be compelled to lockstep behind a Federal educational autocrat, who could not possibly be in a position to appreciate highly individualized and specialized demands of forty-eight different states."

The country needs more democracy and less bureaucracy. — *Ohio State Medical Journal.*

HIGH COST OF FUNERALS IS BEING INVESTIGATED

One of the large life insurance companies has announced the appropriation of $25,000 to investigate the high cost of funerals.

"After one of the life insurance companies has spent the $25,000," *The Atlantic Medical Journal* says, "in investigating the cost of funerals, it will have discovered only what everybody knows—that funerals are expensive things, and that often more is spent on them than the relatives or friends of the deceased can afford.

"Extravagance in funerals, curiously enough, is more marked among the poor than the rich. Physicians have had the unfortunate experience in presenting bills to an estate, of finding that almost the entire amount has been used in burial. Two recent cases may be cited which are repetitions of frequent occurrences.

"An unmarried laboring man died following an operation leaving an estate of $750. A sister, who was executrix, called to see the surgeon who had performed the operation for intestinal obstruction, to explain why she could not pay the bill of $150 which he had rendered. The funeral cost $525, the hospital expenses were $75 and there were several other smaller accounts amounting to a little more than $100. As she had paid all these bills, she was unable to pay the surgeon or the attending physician.

"The other case was that of an unmarried man who had also died from an intestinal obstruction, leaving an estate of $625. Without taking into consideration the services incident to hospitalization, and the attending physician and surgeon, the administrator contracted with and paid the undertaker $560 for the funeral, and later advised the physicians he would be very glad to pro-rate what was left after he had paid the hospital bill, amounting to $57.

"The physician always seems to be the last taken into consideration. On the other hand, why are administrators of estates permitted to get away with such maladministrations?"

FUMIGATION USELESS, COSTLY SUPERSTITION

Fumigation is a superstition that is known to be not only false but actually dangerous, as it gives a false sense of security, says Dr. Harold B. Wood in the March *Hygeia*, popular health magazine published by the American Medical Association.

Careful experimental work has proved that fumigating rooms after quarantine for infectious diseases accomplishes nothing. It is, at best, only a form of cleaning, and it is hardly fair for health departments to have to clean people's houses, states Dr. Wood.

Smallpox is to be considered separately. The only way to control it absolutely is by means of universal and early vaccination. Quarantine and fumigation are not enough.

DRAMATIC STORY TOLD OF YELLOW FEVER CONQUEST

The history of the conquest of yellow fever is about to be published. It is a story of battle and sacrifice, but no chapter of it is more thrilling than the story of how it was written.

An old man, worn and sick, fought death, as he struggled for breath with which to dictate the book to his daughter, a devoted woman who labored day and night without rest to help her father finish the work before his death.

The man was Dr. Henry Rose Carter, who had already done his share in the conquest of this disease. The loyal daughter is Miss Laura Armistead Carter. Their story is told in the April *Hygeia*.

In the tiny, primitive quarantine station at Ship Island, in the fever swept regions of Mississippi and Louisiana, in the infested Panama Canal Zone with Gorgas, in Peru and in the army cantonments during the World War, Dr. Carter carried on his valuable work in combating this disease. But he could not rest until he had finished the task assigned to him, when the Rockefeller Foundation asked him to write this great history.

The West Virginia Medical Journal

Directed and Edited by the Committee on Publication

[The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible]

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS:

WALTER E. VEST, Huntington — HARRY M. HALL, Wheeling — J. HOWARD ANDERSON, Marytown — C. W. WADDELL, Fairmont

MR. S. O. NEALE, *Secretary-Business Manager*, Charleston

Entered as Second Class Matter, January 1, 1926, at the Postoffice at Charleston, West Virginia

Volume XXII JUNE : 1926 *Number 6*

ADDRESS OF THE PRESIDENT *

JAMES R. BLOSS, M. D.
Huntington, W. Va.

MR. CHAIRMAN, Fellow Members of the West Virginia Medical Association, Ladies and Gentlemen:

For twenty years I have been a member of this Association. Well do I remember the awe which filled my soul when I heard the President's address at my first annual meeting. I remember I wondered if he appreciated the greatness of the occasion; if he felt the high honor his fellow physicians had conferred upon him.

The thought that possibly some day I should be so honored never occurred for a moment. It seemed that merely to be given the privilege of membership, and to attend the meetings was all the honor one could ask or even wish for.

Even now it seems very wonderful that my fellow physicians have seen fit to bestow upon me the highest gift of the Association —the Presidency. It is the most signal honor I have ever received. For it I thank you from the bottom of my heart.

The greatest privilege of membership in our Association has been to be given the opportunity to work in a small way for the welfare of the medical profession of West Virginia, and to be a cog in the wheel of medical organization. It seems that fate was with me in this for after a short apprenticeship as a member, the Society of my home county entrusted their secretaryship to me. This brought with it the responsibility as a delegate to the State Association.

For ten years I attended the annual meetings as the Secretary-Delegate and came in contact with those earnest, loyal men who were then directing the affairs of our State

* Delivered at the fifty-ninth annual meeting of the West Virginia State Medical Association, at Morgantown, May 25, 1926.

Association. It was a wonderful experience, and I am truly thankful for having been associated with them. Their ethical standards, their views, their sincere ideals became my creed, to guide my professioal footsteps.

The practice of medicine is the greatest of all professions. No other profession or calling in life gives to us such a great opportunity for service to our fellowmen. At times I cannot but think upon this and question, in my mind, if we are keeping this ideal of service first before us. It is a sad thing to know that we live because of the misfortune of our neighbors. It would be an ideal existence if we did not have to consider the financial aspects of our profession.

Commercialization

This brings me to the first of the subjects which it seems pertinent to dwell upon at this time, namely, the danger of commercialization to the profession of medicine.

True, physicians like all other men, must labor that they may live, and it is equally true that "the workman is worthy of his hire". This is readily granted, but I sometimes wonder if there is not creeping in too much of the commercial view. It seems to me that we find too much of the idea of financial reward and quite an exaggerated idea of just how valuable the workman is. To restore health, to save life possibly, cannot be measured in dollars and cents, but it is not in accordance with the Golden Rule of the Greatest Physician, for us to compel a man of moderate means mortgage his home to pay us exorbitant fees.

Business methods should be adopted in our system of collections. We should expect to be paid for our services by those in position to pay us, and we should make those able to pay, and who will not, settle their accounts. But let us first render the service, and the best service in us, and charge reasonably.

In this connection comes to me the unfairness worked upon physicians who are members of the staffs of endowed hospitals and clinics. This is more prevalent, I think, in large cities. Here physicians give their services free to persons applying as charity patients, regardless of the income earned by the applicant. There is a dangerous element in giving charity to persons earning from forty to one hundred dollars per week. It is not right that this should be given and no charge made.

A surgeon friend of mine tells me that not long since a man applied for charity service for an operation upon himself for acute appendicitis, his salary was one thousand dollars a month. His wife and daughter were going abroad, and he could not afford to pay for the operation.

The great danger as I see it, in the future of the profession, if commercialization becomes the slogan of our calling, is some form of state medicine. This particular form of paternalism is not so far distant as some of us may be inclined to think. Already plans have been made providing that any man who has ever served in the United States Army or Navy in any way may receive medical and surgical treatment, even hospitalization, for any disease or injury contracted or received at any time since his discharge from the service.

There is no limit to what should be done for a man injured or incapacitated while serving in either of these branches of the military service, but there is no justice in giving this medical care to men not so incapacitated, and who are able to pay a reasonable price for treatment. This is but one example of what the medical profession may expect in the way of governmental control in the future.

It is recommended to the Committee on Public Policy and Legislation that this matter be investigated, and that it cooperate with the proper committee of the American Medical Association, concerning bills of this nature which may be introduced into congress.

Incorporation

I am glad to say that, at this session, steps have already been taken by your House of Delegates for the immediate incorporation of your Association. It seems strange that for so many years the Association should have continued to exist without ever having been incorporated under the laws of West Virginia as a scientific organization. The cost is

minimal for such a body, and the annual tax negligible. The advantages are many and self-evident.

The Executive Secretary

A number of years ago Dr. Butt in his presidential address plead the cause of a full time executive secretary, and that the Association should have its own home. It took nine years for us to grow to the point where those earnest in the welfare of the Association could convince the House of Delegates that we needed an executive secretary.

It gives me great pleasure to say that the dire prophecies of the opponents of this idea, as to loss of membership and so on, have not come to pass. There has never been such interest manifested in Association affairs as in the past year. This past year was not a true measure of the value of this move because of the vast amount of detail work in getting the office organized and in operation.

The whole idea of the Executive Secretary's office is one of service to be rendered to the individual members of the Association. If the members are not receiving help, it is because they have not asked for it. It has already become necessary to secure larger quarters, and an additional typist will be needed before the year is out, if we are to continue the present growth. The House of Delegates should authorize the Council to increase the personnel of the office as is required.

The Home of The Association

I would bring to you again the hope of my illustrious predecessor concerning the building to be constructed for the use of the State Association. In this would be housed the executive offices, the association library, with assembly halls, committee rooms and museum. The present financial condition of the organization is such that it seems possible for us to contemplate some plan for bringing this idea to a realization.

The recommendation is made that the House of Delegates appoint a committee of five members to investigate the feasibility of this and report to the House at the next annual meeting.

The Journal

The Journal comes to you from your committee in compliance with your instructions of last year. The increase in the size of the pages gives us a far more attractive publication in every way. It gives more reading matter. The committee's change in paper has simplified the matter of illustrations. In our opinion the selection of the personnel of the five members of the Publication Committee was an exceedingly wise choice. The scientific articles show their careful selection of material. By having this whole committee to pass upon articles submitted for publication we have the assurance that a mass of irrevalent and worthless material will not be published to litter up, so to speak, medical literature. We may feel justly proud of our journal.

The Physicians' Home, Incorporated

A very worthy undertaking has been begun by a few physicians of the country, which it seems to me should be brought to your attention. I refer to the "Physicians' Home, Incorporated." This is an organization which has grown from an idea which developed in the minds of a few physicians of New York. Their plan was to establish a home for physicians incapacitated from active practice because of age, illness, etc. A home called "Tranquility" was opened and has been operated near New York City for some five years. It has proven to be so satisfactory in the accomplishment of its purpose that now the pretentious plan of making it an organization national in character has developed, and the broadened scope of its work has been undertaken.

Under this plan homes will be established throughout the country, as occasion arises, for caring for the members of our profession in need of a home of refuge in their declining years, under surroundings which will make life a pleasant thing rather than a growing terror as the days pass.

The plan has been approved by the American Medical Association. I would suggest that information concerning this matter be secured by the editorial staff of *The Journal*, and be given to the members from time to

time, that we may each become interested and do our bit toward the endowment fund.

Vital Statistics

At various times in the past members of the medical profession have very vociferously demanded a rigid enforcement of various statutes in relation to the practice of medicine. We feel that all the laws as set forth in the Medical Practice Act should be enforced strictly and to the letter.

It is only recently that the State of West Virginia has been admitted to the registration area of vital statistics in the United States. It was more or less of a blot upon our professional escutcheon, that we were without the pale. All of us felt this very keenly, and it was only after great labor and effort on the part of our Health Council that we were finally admitted.

Now that we have become one of the registration states it behooves us, as physicians, to comply with the law governing the registration of vital statistics.

So far as births and deaths are concerned, I am inclined to think that the majority of physicians do report these. However, it seems to me that there is a very woeful lack of responsibility shown when it comes to the reporting of the various communicable diseases, a report of which is required. Unless we physicians show that we are law-abiding, and wish to comply with all the requirements as put forth by the Health Council, it scarcely behooves us to insist upon the strict observance of the Medical Practice laws by others.

The reporting of scarlet fever, diptheria and smallpox is probably always done, but of the other diseases of less virulent character such as measles, influenza, whooping cough and so on, I feel that we do not do our duty as we should. There is no recommendation to be made upon this situation. I have merely wished to call it to your attention, and insist that we, ourselves, practice what we preach.

Physicians As Teachers

In the present day scheme of economical problems the question of the people's health is taking a more prominent position. There seems to be a conscientious awakening to the fact that the health of the nation is its most valued asset. As a consequence we see all manner of civic health organizations springing up. Bureaus of one kind and another are being established almost without end, to preach this or that special point to the people —each organization and bureau trying for Government support in the way of appropriations, with the attending offices and positions to enforce or carry out their line of work.

It has often occurred to me that there is no reason for the existence of these organizations, and many of the bureaus under federal control. The physicians are missing a very great opportunity to assume that important position in the affairs of our State which we should occupy, simply because we do not take advantage of the opportunities afforded us as teachers of our patients.

The close cooperation between the members of this Association and the State Health Council would bring about, far more speedily, very tangible results in the way of health education than can possibly be accomplished in any other way. If we would only teach our patients how to avoid communicating the various transmissable diseases from one to another; if we would use our efforts to awaken the public's conscience to the point of a realization that we are our brother's keeper in health matters, and have no right to inflict disease upon him if we can prevent it, then physicians would have accomplished a great thing.

In the matter of prenatal care of our obstetric patients we have been particularly derelict in our duty, and it has taken the passage of the Sheppard-Towner Act by the federal congress to awaken physicians to a realization that they have not carried their care of these patients to the point which they should.

The Association at its last annual meeting, through the House of Delegates, established a committee on Professional Relations, which committee has among its other duties that of carrying on an educational campaign. From time to time during the year there have appeared in the lay papers of the state ar-

ticles coming from the West Virginia Medical Association through this committee. We cannot but feel that these efforts have not been in vain. Some good has already been accomplished in the few months during which this committee has functioned. It is to be hoped that the members of the State Association will carry on the work which the Committee has begun, and will enthusiastically act in the capacity of public teachers as we go about from day to day carrying on our practice.

The Ladies' Auxiliary

The formation of the Ladies' Auxiliary of the State Association should be encouraged in every way. After only a year's operation, and without very complete organization except in a few of the counties of the state, those of us who have given attention, and have watched the progress of the Ladies' Auxiliary, can see that it has potential possibilities of great value to the State Association.

The association of the wives of the physicians brings a feeling of friendliness among them, which is sure to reflect among the physicians themselves. It seems to be true also that it is going to be a potent factor in increasing the attendance at the annual meetings, for we observe that the wife of one physician urges upon others, whom she meets at the sessions of the Ladies' Auxiliary, to come to the annual meeting and insist upon their husbands attending. Several instances of this have come to my attention this year, and I feel sure that at each succeeding future session a greater number of our members will be present as a result of the wives associations in the Auxiliary.

Professional Friendliness

There is one thing further which it seems opportune for me to speak of, and this is friendliness among physicians. I do not know whether or not it will be possible for me to so state the matter that it will be clear to you what I have in mind. It seems to me that there is a great lacking in the spirit of camaraderie in our profession. This is particularly noticeable when physicians move into new locations. The older physicians seem to be very hesitant about calling upon newcomers. Just what the reason for this is, it is difficult to understand. It may be a feeling of resentment, though I am inclined to believe that this is not so. Rather do I think that it is a feeling of hesitancy as to just what attitude the new arrival will adopt toward his caller.

Then, too, there is that lack of friendliness, which is so desirable, between the older and younger members of the profession. This I think is more easily explained than is the other situation. Too often the older men feel more or less hesitant in calling upon the young physicians who locate in a city because they have the fear that the younger men may act as if they feel the older men are to be pitied because they are so far behind the times. On the other hand the young man moving into a new locality feels more or less hesitancy in calling upon the older physicians for fear that the older men may think they are seeking to curry favor, and so refrain from making advances toward friendly association because of more or less diffidence in this respect. There should be an effort made to remove these obstacles to a friendly and helpful association between men of twenty and twenty-five years practice, and those of recent graduation.

There is work enough for all of us who are willing to work earnestly and honestly for the sick. There is none among us, old or young, so superior in mental attainments that he can afford to refrain from friendly association with his fellow practitioner. The recent entrant into the medical profession may have a feeling of pity for the older man, and feel that he is behind the times and out of it. In this he more than likely errs quite grieviously, for many of the older physicians are exceptionally up to date, and through their practice, observation and a strenuous experience, have long since learned what is of value, and those things which are of relative unimportance. By the same token the older man must not feel that the younger one has not much to give if we will but accept him as one of us.

There is a ground upon which we may meet

in friendly intercourse with our brother physicians, which will be of great value if each of us would only appreciate the opportunity, namely the County Society. The most important thing I have found in the County Society is the meeting with the other physicians and becoming acquainted with them; to know how they think and act.

If each of us would only make it one of the routine things of our lives, to attend regularly our County Society meetings, I am sure that there would be much less of envy and jealousy, and unethical behavior to mar the friendship which should exist among the physicians.

The admonition of the Greatest Physician is as applicable today as when He uttered it nineteen centuries ago, "Therefore all things whatsoever ye would that men should do to you, do you even so to them."

THE DRAMA OF SURGERY IN WEST VIRGINIA *

By CHESTER R. OGDEN, M. D., F. A. C. S.
Clarksburg, W. Va.

MR. PRESIDENT, Members of the West Virginia State Medical Association, Ladies and Gentlemen:

Permit me, first, to express my appreciation of the kindness by which I am permitted to address you. Twenty-eight years ago, on this very day, I said adieu to my Alma Mater here in Morgantown and set sail in the professional ship, on what was then to me, an unknown and uncharted sea in further quest of truth. Now, after these years of voyage and exploration with you, it is indeed a fitting climax to be bidden by your committee, back under the shadow of the State University, to speak on the Drama of Surgery in West Virginia,—an honor in which my personality is lost, but the compliment to my people, my County Society, made plain.

Lines from "*Building of the Ship*" will be the text for this discussion.

Thou, too, Sail on, O, Ship of State!
Sail on, O, Union, Strong and Great!
Humanity with all its fears,
With all its hopes of future years,
Is hanging breathless on thy fate!
We know what Master laid thy Keel,
What Workman wrought thy ribs of steel,
Who made each mast, and sail, and rope
What anvils rang, what hammers beat,
In what a forge and what a heat
Were shaped the anchors of thy hope!

These lines written by Longfellow three quarters of a century ago, are just as applicable to our professional ship as to the Ship of State. To fully appreciate the character and the type of men who blazed the way, laid the keel, wrought at the forge and withstood the heat of the day in the building of our professional ship, it is necessary to be reminded that, in the early days, the Cavalier as well as the Puritan was on this continent. Thirty-two decades ago, one hundred and fifteen souls sailing from Blackwall, England, laid the foundation for our sectional civilization in America. They had come seeking a home in a new world where God had meant his children to be free; where he had divinely indicated this New World as a refuge from tyranny—a haven in which men might live in honor, peace and fairness, and look up at the stars. Slow perfecting through the centuries, these Cavaliers made their way; sometimes 'mid deepest gloom and oppression, other times 'mid scenes of sweet landscapes and fields rich with harvests. They who had journeyed across uncharted seas, helped to found a colony of people, unyielding and unbending in spirit, yet ever touched with a passion for idealism, and, while the Civilization which they started, gradually became tinctured with rare and valuable types of

* Oration on Surgery before a public meeting of the West Virginia State Medical Association, fifty-ninth annual session, at Morgantown, May 25, 1926.

men drawn from many great nations of the earth, still those who had sailed up the James River, on that lovely day in May, left their indelible stamp upon the culture, the spirit and the institutions of the land. They saw their peculiar identity dim and wane only with the advent of the first great American, Nathaniel Bacon, and to be finally lost in the storm of the Great Revolution—the revolution in which neither the Puritan nor the Cavalier survived as such, but leaving, however, their everlasting memoirs as an inspiration for their sons.

Early civilization in this country usually followed the river courses and water ways, and there being no streams of consequence except the Potomac flowing eastward from the Alleghenies, earlier tides of immigration followed to the North and around West Augusta leaving this beautiful wilderness largely untouched and unexplored by civilized man till the dawning of the Nineteenth Century.

Just before and immediately following the Great Revolution, brave and sturdy pioneers from many parts of the colonies crossed the mountains to the west and filtered into West Augusta, establishing permanent settlements along the Monongahela, the Kanawhas and the Ohio. From these, then, were gathered the types of men who laid the keel of our professional ship. Yonder in a little church yard, by the waters of the Upper Monongahela, is a small shaft of marble. Deep chiseled into its shining side is a name, that next to my immediate forbears, is dearer to me than all other names of men, that of my great grandsire; who, when but a child, was borne by brave and resolute hands along blazed trees and unfrequented paths, over the mountains into the wilderness of West Augusta.

Here he grew to manhood, with the equipments given him only by nature, with no institutional training; with crude implements for his work, and with but a few rude volumes from which to acquire scientific knowledge, he lived out a long and useful life, performing the part of the early pioneer doctor.

Not for all the honors and the names of men, would I exchange the heritage he has left me in that simple, noble and homely physician's life. And many others there were, such as he in that early day; some certainly leaving greater, and others probably less, imprint on the civilization of their times. Nowhere in the early development of Western Virginia was greater activity shown in the practice of medicine than in and about the settlement at Morgantown. Some day the medical historian will note more fully, with deserving justice, the important roles played in our professional drama by the early physicians of the Monongahela Valley and elsewhere in West Virginia.

They will tell us more of Eckerly, Baird, Bond, Daugherty, Nicklin, Hersey, McLane, Kelley, Brock, Davidson, Duncan, Hewes, Robinson, Flowers, Fortney, Boggess, Dowie, Wilson and the numerous pioneers in medicine and surgery along the Monongahela, as well as of those equally important who practiced the healing art in the other settlements of this country during the first part of the Nineteenth Century. The building by the mother state of a series of turnpikes in Western Virginia—and the National Turnpike by the Government to the north of us about the middle of this period, the opening of the Baltimore and Ohio railroad to Wheeling in 1852 and to Parkersburg in 1856; and a little later the coming of the Chesapeake and Ohio and the Norfolk and Western railroads to the south, greatly increased the population and the industrial activities in the sections touched by these enterprises and created the necessity for a greater number and better equipped physicians to meet the emergencies of those days. This country, then touched by outside influences, awakened to the importance of the better training for its physicians and at this period, our native sons began pilgrimages to the centers of medical education to avail themselves of institutional training.

Thus did the profession in Western Virginia begin to rapidly strengthen. Wheeling was at this period the most important city. With rapidly growing industrial establishments, as a result of her peculiar location, she was in advance of other sections of this country in the professional accomplishments and training of her physicians. It was there

in June, 1853, that the first hospital in the territory, now West Virginia, was established by the Sisters of St. Joseph. The pioneer work which this hospital did, and the part it has played in the care of the sick and the injured from that day, especially during the Civil War, and up to the present, is a bright page in our professional history. It marked the beginning of hospital work in what is now West Virginia.

Out of the conflict of the great Civil War, came a number of men peculiarly fitted by rare experience in the care of the injured, to assume the roll of surgeons, and at Wheeling, Charleston, Parkersburg, Clarksburg, Fairmont and Morgantown were found men worthy to be classified as such and who soon filled an important place in the profession at that time.

Standing out prominently at this period are the names of many who were also active in the organization of the West Virginia Medical Society, among whom were Kennedy, Brock, Hupp, Mackey, Hildreth, Cummins, Bates, Todd, Ramsey, Reeves, Pinnell, Cracraft, Bowcock, Storer, Flowers, Brownfield, Lazelle, Ogden, Dent, Sharp, Campbell, Safford, Baird, Young and Thayer. There were many others deserving of mention, who were prominent in the state at that time, and, to leave them out of this discussion, is not to publicly acknowledge their great importance in the history of the profession in West Virginia.

It is not uncommon, in these days, to hear modernists decry the usefulness of those early types of physicians; that they were crude; that they did not do much good, because there was not much to do. This may be so, but their existence was a great necessity, and for their day and generation, they served with as marked distinction and with as much if not more grateful appreciation from those whom they served, as the physician and surgeon of modern times.

The life of the early physician was harder than the physician of today; he met the emergencies usually unaided and alone; he was the embodiment of sympathy, cheerfulness and self sacrifice; he was a part of all of the physical and shared with his patients most of all their other troubles; his associations with the people of his community were most intimate; he saw life in all its realities; he knew the secrets of his patients' lives; he went into the most sacred precincts of the home; he knew the motives of his patients' actions, the real causes of their happiness and the tragedies of their disappointments; he was often minister, lawyer and councillor; he was the parents' hope at the birth of their babies and most often the earthly comforter in the sad hours of death; he treated the wounds, the fractures, the dislocations and performed necessary amputations—meeting with grim fortitude the emergencies of his day.

The development of medicine and surgery has always been an evolutionary process. Each advance has been an accumulation of a series of efforts mingled with failure and success.

These early physicians in West Virginia at least carried the torch before it was given to those who later carried it to the goal and they are reaping the reward of immortality.

All honor to them who toiled not in vain and passed away before the crowning of the end.

They might have at least passed on to us the message of Stroud: "I may never take you farther than I have been myself, but you may press on when I tell you of the vision I beheld.

"You may never fashion from the things I wrought, but you may take your reckoning from the rare design where my clumsy hands fell short." The foundations of medicine have been laid by the architects of former days. "Thrice wise is he who knows the quarries and the builders of bygone ages and is able to differentiate the stones which have been rejected from those which have been utilized."

There is no better inspiration to good work, than the study of the lives of the pioneers of medicine who labored on to success and whose names live in the annals of our science. The physician who is not familiar with the history of medicine, labors under a disadvantage. As a profession in West Virginia we are now old enough to have made some his-

tory of our own, with which we should all be familiar. Each generation builds on the shoulders of a preceding one, and, as our forefathers came into the wilderness of Western Virginia by blazed trees and unfrequented paths, so the present generation is striving to get out of the professional woods by guideposts of efficiency and by well established routes in modern surgery.

The last part of the Nineteenth Century witnessed in West Virginia a medical profession, advancing rapidly, as a result of the activities in the State Medical Association and of the many new discoveries in the control of disease.

The rapidly expanding industrial developments saw the new century dawn, with the establishment in rapid succession of splendid hospitals in most of the important centers and a profession thoroughly aroused to the importance of better facilities and better equipment for the care of the sick and disabled. Nowhere in West Virginia was noticed more rapid advances in the development of hospitals and surgeons than in the Central and Southern portions of the state, where the opening up of large mining and lumber operations made it necessary to have such institutions and competent surgeons to provide for the care and the treatment of the injured and diseased.

So, now, slow perfecting through these years, has come a class of surgeons, who, building to the types of their fathers, reinforced and strengthened by rare and valuable types of men from other localities, have reached such a degree of proficiency as to merit a place in the sun, and worthy to be catalogued and listed among the names of those who are doing the noblest and grandest work that God has vouchsafed to man.

But what of the future?

Surely a profession with such a record in the past, with such efficiency at the present and with such possibilities ahead, will not tarry long on the heights attained, but will press on, blazing new trails into forests yet undeveloped and unexplored. It may be well to pause and rest occasionally on chosen terraces in the ascent of a mountain. One needs to look back, at intervals on the path he has trod, to check up his course, and to consolidate his gains that he may obtain proper bearings for further and higher stages in the journey.

There must be breathing spells.

"Many green isles there need must be,
In the deep, dark sea of misery,
Or the mariner, weary and wan,
Could never, never, voyage on,
Day and night, night and day."

The consciousness of duties well done; of victories over disease and death; the realization of grateful appreciation of those to whose sick we have ministered and for whose children we have cared, these are the green isles at which we touch along our voyage, and where we become refreshed and rejuvenated for further conquests.

The goal of our journey is in the Golden West. In the lands ahead, the fruits are waving in the fields of matchless green, and rich, not with growing harvests of disease, but with harvests of preventive surgery as well as of preventive medicine.

The isles, not so far away, will, one by one, reveal the inevitable fate of the medical profession—that it is voyaging on toward its own obliteration.

During this evolutionary voyage, there will always be an important mission for the medical man and the surgeon. Each will have less and less to do with the sick and the injured and more and more with the prevention of illness.

Common sense and the tendency of scientific work declare it is better and cheaper to keep one man on guard to prevent the spark from igniting the tinder, than to summon a multitude in the hour of distress to save the burning Citadel. One of our social absurdities is permitting people to become ill and injured and then employing a doctor to get them well.

As preventive medicine increases its activities, so will the necessity for the surgeon be decreased. The prevention of unnecessary accidents in factories, mills and mines; more sanity in driving and handling automobiles and other vehicles of transportation; more care in the use of machinery on the farms; better care and attention to the parturient

woman; the control of venereal disease, and drunkenness; a better knowledge of the kinds and the preparation of foods we eat, are some of the advances that will lessen the need for the surgeon.

There may be what seems at times threatening clouds arising along our course in the form of the pseudo-scientific sects, but they will prove only false mirages on the horizon, and which will soon fade under the brighter light of scientific medicine and surgery.

We may see other dark and ugly clouds gathering about in the shape of the charlatan and the quack and fear that the recognition given them by state governments, by private individuals and even by members of our own learned profession would seem to impair the stability of true medicine and surgery. To such as are disturbed by their influence, let it be said:

"Fear not each sudden sound and shock,
'Tis of the wave and not the rock;
'Tis but the flapping of the sail,
And not a rent made by the gale!
In spite of the rock and tempests roar,
In spite of false lights on the shore,
Sail on, nor fear to breast the sea!
Our hearts, our hopes are all with thee."

Let it ever be remembered that preventive medicine has no rivals. This realm is never invaded by the charlatan, the quack or the pseudo-scientific sects.

Osteopathy, Chiropractic, Christian Science, Emanuel Movement, Vitopathy and the numerous other cults are not interested in prevention, all are zealous in attempted treatment of disease. Medicine as an organized profession is the only movement aiming at prevention of disease.

You remember in Greek mythology how the sirens by their music lured all who sailed by their island to their destruction; and how the crafty Ulysses in order to preserve himself and his crew, stopped the ears of his sailors with wax, and bound himself to the mast; but the sweet singer Orpheus, with his band of sailor musicians, as they approached the island, made so much sweeter music than the sirens, that becoming disgusted, despondent and humiliated, they rushed into the sea and were drowned. It is for the regular medical profession to play the part of Orpheus, and by its superior art, and the application of scientific training, make so much better showing, so much better music, so let the light of true knowledge shine, that these pseudo-scientific cults will be either lost in the oncoming waves of true medical art, or else themselves be willing to go far enough to get into the main circus tent and not stop in a mere side show.

However remote in the future or how near at hand the perfect day of preventive surgery may be, we can only see our present duty to voyage on and occupy till it comes. Let us cherish all the aspirations that comes to souls amid grandeur and change; standing aloft and opening a heart of conviction to skies and cloudlands of truth, unbound by the fetters of contention, viewing all the country and its institutions from the aerial heights of efficiency; rarely pausing on chosen summits of progress, undisturbed by the fear of pseudo-scientific cults and untroubled by the torments of professional strife.

If in our veins, there dwells enterprise, courage, and honorable love of glory and renown, then let us, with a prayer for guidance, with a determination to be loyal to every truth, with wills as strong as the torrents that rush down our mountain sides on their way to the sea, and with purposes as pure as the gentle whispers of the evening's sighing zephyrs, do what we can to make our generation one of the brightest links in that Golden Chain, which was designed to connect those who laid the keel of our professional ship with surgery in West Virginia for ages to come.

Let us not falter in our great task of happiness remembering the beautiful lines of Joaquin Miller in his ode to Columbus:

Behind him lay the great Azores,
Behind the gates of Hercules,
Before him not the ghost of shores,
Before him only shoreless seas.
The good mate said: "Now must we pray,
For lo, the very stars are gone.
Brave Admiral, speak, what shall I say."
"Why, say, sail on, sail on, and on."

The men grew mutinous by day,
The men grew ghastly pale and weak;
The sad mate thought of home, a spray
Of salt wave washed his swarthy cheek,
What shall I say, brave Admiral, say,
"If we sight naught but seas at dawn."
"Why you shall say, at break of day,
Sail on, sail on, sail on, and on."

They sailed, they sailed, then spoke the mate
"This mad sea shows its teeth tonight,
He curls his lip, he lies in wait,
With lifted teeth as if to bite.
Brave Admiral say but one good word,
What shall we do when hope is gone?"
The words leaped as a flaming sword—
"Sail on, sail on, sail on, and on."

THE DURATION OF PASSIVE IMMUNITY IN MEASLES PROPHYLAXIS *

By GEO. M. LYON, B. S., M. D.
Huntington, W. Va.

IN FEBRUARY and March of 1923, twenty-six patients of pre-school age were injected with from 5 to 10 cc. each of human convalescent measles serum. In twenty-one cases the serum was taken from adults less than one week after the febrile period. The patients immunized were grouped as follows:

Serum Inj.	*Wt. of Patient*	*No. Cases*
5 cc	20-25 lbs.	1
6 cc	25-30 lbs.	5
7 cc	30-35 lbs.	10
8 cc	35-40 lbs.	8
9 cc	40-45 lbs.	1
10 cc	45-50 lbs.	1

Sixteen families were represented as follows: Nine families with one child each; four families with two children, and three families with three children. All but two patients were injected from 3 to 8 days after exposure. These two were injected the day preceding the appearance of their rash, and of the twenty-six they were the only ones to develop measles, even in a mild or atypical form. Records were kept of each case; definite exposures were noted in order that the duration of the protection might be observed. The work was done at the beginning of an epidemic in the Spring of 1923. There were practically no measles cases in the community from then until the Spring of 1926, when an unusually severe and quite general epidemic occurred. In five of the families reported above there have been measles infections in children born since the 1923 epidemic, all occurring early in the epidemic of 1926 before convalescent serum was available. In six other families there have been prolonged exposures by servants living in the house, or relatives visiting in the home, who contracted measles while in the house and were forced to stay there during their illness. Eighteen of the children immunized with convalescent serum in 1923 have been repeatedly exposed during the 1926 epidemic in their ordinary life at kindergarten, school, etc. The others have all been exposed repeatedly and quite definitely at least three times as their exposure records show.

This would suggest that there is at times a longer duration to the passive immunity conferred by convalescent measles serum than that suggested in previous observations. Zingher[1] says "The duration of passive immunity produced by injecting convalescent serum in doses recommended during the first few days after exposure is rather short, not lasting more than from four to five weeks. When convalescent serum is injected on the sixth day or later, a mixed type of immunity

is produced, which lasts for from two to three months. If a modified attack of measles develops, the immunity is probably permanent. The reports of different observers indicate that the passive immunity will last only from thirty to forty-five days. Following a second exposure, one of our patients developed measles forty-two days after a protection dose of serum." Regan[2] feels that it is primarily a passive immunity that is conferred and that it is of a short duration. He advises giving the serum late (eight to ten days after exposure, that is, in the period of incubation) and thereby producing a modified attack of measles with probably a permanent and active immunity. Herman[3] has recommended producing a combination of active and passive immunity by swabbing the phanyngeal mucus membranes of the child with an active measles virus, and twenty-four to forty-eight hours later injecting the human convalescent serum. Degwitz[4] feels that there is some active immunity developed and he has observed that the blood of patients immunized is effective in prophylaxis even though they have never presented any symptoms of measles.

Since so little is known of the immunological reactions which occur in the prophylaxis of measles with convalescent serum, it would be well to have most complete records kept of all patients so immunized in order that the important features which may influence the length of duration may be studied.

This report is submitted as being the observations on twenty-four cases immunized three years ago and carried without infection through an epidemic immediately after immunization, and a second epidemic three years after immunization Is not that a long time for a simple passive immunity to last? Does it not suggest that certainly in some cases at least, there is an element of active immunization present?

BIBLIOGRAPHY

1 Zingher, Abraham: Convalescent Whole Blood, Plasma and Serum in Prophylaxis of Measles. J. A. M. A. 82: 1180 (1924) April.

2 Regan, J. C.: The Symptomatology of Measles Modified by Late Serum Immunization. J. A. M. A. 83: 1763 (1924) May.

3 Herman, C.: Arch Pediat. 32: 503 (1915).

4 Degwitz, R.: Zeitschrift fur Kinderheilkund 25: 134, 1920 and 27: 171, 1920; Deutsch. Med. Wochenschrift 48: 26, 1922.

THE DIFFERENTIAL DIAGNOSIS OF SYPHILIS AND FOCAL INFECTION FROM THE EYE AND EAR MANIFESTATIONS *

By GEORGE W. MACKENZIE, M. D.
Philadelphia, Pa.

WHEN YOUR SECRETARY, Doctor Oscar B. Bierne, first wrote, inviting me to participate in your meeting, he at the same time asked for the title of my paper and cautioned me not to make it too technical, since most of those in attendance would be general men. I replied, accepting the invitation, and suggested, because of the popularity of the subject, the title: "Focal Infection." He wrote again, asking what phase of the subject I desired to present. After considering the question awhile, the subject covered by the title of the paper suggested itself as a fitting one, for the reason (1) that there is enough similarity in the eye and the ear manifestations of syphilis and focal infection as to have led specialists, and good ones at that, to misinterpret the etiology, every now and then, with more or less disastrous results. (2) That because of the frequency of these two diseases, accounting for 70 per cent. or more of the chronic ailments, we must class-

* Read before Tri-State Medical Society, Huntington, W. Va., January 28, 1926.

ify among them the diseases of first importance. (3) That on account of the protean character of both diseases, their consideration before a mixed assemblage of general men and specialists would seem warranted. (4) That since the subject of the Differential Diagnosis of Syphilis and Focal Infection has not been presented before, to my knowledge, is excuse enough for presenting it at this time.

Concerning the prevalence of syphilis Greeley[1] states: "At Bellevue Hospital in New York City, 22 to 25 per cent. of all patients give a positive reaction." As to the importance of focal infection, Judson Daland,[2] of Philadelphia, says: "Focal Infection is as important in clinical medicine as infection is in surgery."

At one time I believed that in eye, ear, nose and throat diseases, syphilis was the most important single etiologic factor. This belief was prompted by the fact that most of the best hits in my experience up to that time, were in those cases in which I was able to recognize the presence of syphilis, that the previous fellow had failed to recognize. My present belief is that syphilis is a very important factor in the etiology of local, as well as general diseases, but that focal infection is an even more important one, from the standpoint of frequency. In other words, if we grant that syphilis figures in ten per cent. of all chronic ailments, excluding the malignant tumors, then focal infection figures in sixty per cent. Frank syphilitic manifestation is at times difficult to recognize; witness the number of cases of gummata of the septum, operated for septal deviation, with generally unsatisfactory results. Consider also that class of obscure syphilis in which the syphilis, though it is not the direct cause of the patient's ailment, contributes largely to aggravating it. To illustrate the influence of syphilis as a complicating factor I will cite, briefly, two cases.

CASE 1. That of a boy, apparently in good health and with a negative family history, was stricken with mastoid empyema following an acute middle ear suppuration. The case was operated upon by my associate, Doctor William G. Shemeley.[3] The patient did well for awhile, but to the embarrassment of all there developed a pyemic temperature,, which Doctor Shemeley worried along with for a week or ten days. When he had about decided to ligate the jugular and open the sinus, I suggested a Wasserman test. The report came back: "weakly positive." The patient was put on antiluetic remedies. From the very start he began to improve and kept it up, so that after ten days of inunctions of mercury, every indication of thrombophetis had completely disappeared.

CASE 2. A married man, thirty-two years of age, who was referred because of multiple neuritis, apparently due to badly diseased tonsils and right-sided frontal sinusitis. The family history was negative and he had three healthy children, the youngest less than a year old. It was this negative history, together with the assurance of the family physician that he felt the patient was free of any syphilitic taint, which threw me off the track for the time being. Following tonsillectomy and the external and internal opening and drainage of the frontal sinus, there was marked improvement in the patient's condition from every angle. The improvement, however, was only temporary. After the loss of three weeks or more, I was prompted to have a Wassermann test made, on the strength of two signs, which in my judgment are cardinal, namely, a dirty gray anemic appearance of the patient and the persistence of symptoms, in spite of all that had been done for him, which, in the ordinary run of cases, works favorably. The report on the Wassermann test came back, plus four. After this, all was clear sailing. (This case I was privileged to report in detail elsewhere).[4]

These two cases, selected from many, tell me, as nothing else can, that not every case of ordinary pyogenic infection is such, pure and simple. On the contrary, they are not infrequently complicated with syphilis. When syphilis is present, it tends to disturb the picture and make the pyogenic infection more resistant to that particular form of treatment which ordinarily is successful in the uncomplicated cases. In other words, attention must be paid to the syphilitic factor; at times, even more than to the more

apparent pyogenic, as in the two cases just cited.

That a focal infection can act detrimentally, much as syphilis does, in complicating other diseases, remains to be proven. However, from personal observations, I am inclined strongly to the belief that it does. But this is a subject itself and for some future occasion.

Let us next review, briefly, these two diseases, in order to see what characteristics are common to both and responsible for the similarity of their manifestations; and which makes the differentiation necessary for an exact diagnosis.

1. Syphilis and focal infection diseases are both protean in character (referred to earlier); it would be difficult for one to say which is the more protean in its manifestation, for no part of the body appears to be exempt in either case.

2. They are both essentially chronic infections. Generalized or secondary syphilis is due to the presence of the *treponema pallidum* in the lymph and blood streams, which, incidentally, brings the virus to every organ and tissue of the body. Focal infection disease is due to a similar spread of *toxic material*, generated by pyogenic bacteria at a particular focus. The dissemination of pyogenic bacteria through the blood stream constitutes a bacteremia and should be excluded from the group of so-called focal infection diseases. At the primary focus there is a low-grade pyogenic inflammation, one that shows but slight tendency to spread or find for itself drainage, as occurs in the more acute suppurations.

3. When they are *active*, both diseases show a slight rise of body temperature, as a rule, the rise is not more than one degree above normal. Of the two diseases, syphilis shows the higher rise. In the case of an active focal infection disease, there is a slight but positive elevation of temperature, which the average observer is prone to miss.

4. Though the treponema is the activating agent in syphilis, not every case of syphilis reveals the presence of the same strain. Treponema, morphologically, vary but little, if at all, but in their pathogenesis the different strains vary considerably. So, too, do the pyogenic organisms of the same general appearance behave differently, according to their several strains. Reasoner, [5] following up the work of Nichols, [6] was able to show at least 20 different strains of treponema. I have recently heard a bacteriologist of repute, in a staff meeting of St. Luke's hospital in Philadelphia, tell that there are more than a hundred different strains of streptococcus. The only way to distinguish them from one another is by their pathogenesis. Furthermore, Rosenow and others found that the virulency and selectivity of action of the streptococcus can be changed by varying the amount of oxygen tension, so that transmutation in strains, at least is possible. A relatively innocent strain can be changed into a virulent one in the laboratory by lessening the oxygen tension. The same thing can be observed clinically when a relatively innocuous strain of microorganism, found in the open tonsillar crypts of a child, later on become intensely virulent, as a result of closure of the cryptal openings by the tonsillar plica. Soon secondary manifestations begin to develop, such as arthritis, cholecystitis, neuritis, peptic ulcer, myositis, nephritis, or other equally serious affections, including the several diseases of the eye and ear, about which more will be said later. On the other hand, witness the benefits derived from drainage of even the smallest infected area. Verily, it is the ventilation (oxygenation) of the involved area that accomplishes the result as much, if not more, than the mere drainage. An area of pyogenic infection, covering many square inches on the surface of the body, will produce less ill effects than an area one millimeter square will cause locked up in the tissues away from the air. Take a case of neuritis, one of many of a similar kind that I was privileged to study very closely—that of a middle-aged man who suffered so severely with left-sided brachial plevus neuritis that he was unable to sleep longer than 20 minutes at a time for several months. After the removal of a right, lower, second bicuspid, marked relief of pain occurred within 20 minutes. There is much more of interest about the case, which I must forego telling at this time. The particular point I wish

to make is that of the marked improvement in so short a time. This cannot be a false observation, for I have seen it happen too often, and others have also. How can the improvement be explained in any other way than by the discontinuance of the supply of a very vicious bacterial toxin at its source, in the periapical infection, which called for the extraction. In some of these cases I have seen the improvement quite as evident following extraction, where no currettment was attempted, as in others where it had been done effectually. However, there was this difference: In those cases where no currettment was done, there were subsequent relapses, while in those thoroughly curretted, there was none. Now, I would not like to be understood as claiming that the elimination of the primary focus is invariably followed by improvement within 20 minutes, for many times it is longer. It depends largely upon how fast the body can eliminate the toxins. In those cases of improvement following extraction, where no currettment was attempted, the only logical explanation for the improvement must be that of decreased toxicity from ventilation of the infected socket.

At this juncture your attention is called to the etiology of aortitis, which, until recently, was generally considered to be almost, if not always, syphilis. Lester Neuman, [7] in an excellent contribution, has recently called attention to the nonsyphilitic form, which, in the majority of cases, is attributed to focal infection. No doubt many cases of aortitis, at one time thought to have been due to syphilis, were, in fact, due to an isolated area of infection in some part of the body distant from the aorta. From present indications our conception of the etiology of many diseases will have to be modified, assigning to focal infection a more prominent place, even, than that now held by syphilis.

5. The character of the lesion in these two conditions resemble each other, more or less. (*a*) The character of the inflammation in both is distinctly of the productive type. In syphilis the infiltration is more pronounced than in focal infection, with the tendency to form so-called granulomatous tissue. Furthermore, in syphilis, plasma cells are found; those cells which are the antecedent of the fibroblast. Again, giant cells are found in syphilitic lesions, but, very rarely. We do not find plasma cells and giant cells in those inflammations, secondary to a focal infection. (*b*) The small, round cell infiltration is the outstanding feature in both inflammations. (*c*) The site of the infiltration in both diseases is in the connective tissue, therefore, interstitial. (*d*) The infiltration follows the perivascular lymph spaces in both. This applies particularly to inflammation involving the nerve structures. The illustrations in G. Alexander's [8] contribution on the so-called rheumatic neuritis of the seventh nerve, shows this character of the infiltration typically. (*e*) In syphilis there are definite and well-known changes in the blood vessels, but the most characteristic is endarteritis, which narrows the lumen of the vessels, thus impoverishing the large granulomatous infiltrations (Gummata) causing them to necrose. This necrosis is not known to occur in focal infection disease; however, it appears that the so-called senile changes in the vascular system are favored by this disease.

6. There is a somewhat similar blood picture in these two diseases. Hazen refers to the work of Lezius, [9], Andrews, [10], Emerson, [11], Gaillard, [12], Cabot, [13], and others in the study of the blood findings in syphilis. In the main, they all agree that in early syphilis, in the majority of cases, there is little change in the number of red blood corpuscles, although women may show a drop of 20 to 25 per cent. In later syphilis, there may be an extreme anemia, a reduction both in cells and in the hemaglobin. Muller, [14], and Weicksel [15], have reported cases of pernicious anemia as being due to syphilis.

Emerson claims that: "In hereditary and tertiary lues the red blood cells are seriously affected in number, size and color. Megaloblasts are common. The blood picture, especially of the long standing cases, with much scarring of the organs and sclerotic bone marrow, may resemble primary pernicious anemia." There is a slight leucocytosis in syphilis; rarely, is it pronounced, as high as 15,000. On the other hand, there is a distinct lymphocytosis as high as 65 per cent.

In the "Frontal Sinus" case, to which I referred earlier, the erythrocytes were reduced to 1,760,000 and hemoglobin to 35 per cent. In this same case the polynuclear neutrophiles were 72 per cent and the small and large lymphocytes, combined, were 21 per cent. The white blood cell count pointed more toward a pyogenic infection than a syphilitic one; while the reduced red cell count and hemoglobin percentage were more characteristic of the syphilitic factor, which was confirmed by the rapid improvement following the administration of antileutic remedies.

Daland [16], made a careful study of the leucocytes in a hundred cases of periapical infection in adults and concludes as follows: "After much reflection, I believe that most authorities would agree the following statements are conservative: in the adult, 7500 leucocytes per cubic millimeter is average normal; the physiologic range is between 6500 and 8500; 10,000 or more represent leucocytosis and 5000 or less, leucopenia; 80 per cent or more, indicate polymorphonuclear increase, and less than 65 per cent represents the beginning of polymorphonuclear decrease. Assuming that 38 per cent or more lymphocytes in adults represent lymphocytosis, in 100 cases of chronic periapical disease, lymphocytosis was present in 54, chiefly due to an increase in the small lymphocytes. The lymphocytes in lymphocytosis varied between 38 and 62 per cent. Leucopenia was present in 54 cases, assuming that 5000 leucocytes or less represent leucopenia."

I agree with Daland in the main, but think he is overly conservative in his estimates. My own experience is that in the case of focal infection, independent of its location, providing secondary, manifestations are already present, the majority of cases will show a moderate decrease in the hemaglobin and decrease in the red blood cell count, a moderate increase in the white count, rarely above 13,000, with a relative decrease in the per cent of leucocytes, average somewhere about 60 per cent; with a relative increase of lymphocytes, to about 38 per cent; while the small lymphocytes show a greater increase relatively than the large. Cases exist where the variations from the normal are less marked. The blood picture in syphilis and in focal infection comprise an interesting and important chapter in the study of each of these subjects; however, our present knowledge is not yet complete.

So far, the paper has dealt almost entirely with the more general considerations of the subject, and yet, had these not been included, along with the more restricted eye and ear manifestations, there would have been something lacking in this contribution. Besides, before a meeting such as this, where the general practitioner is in such a large majority, one can afford to be more liberal in the consideration of the general features of these two diseases, even at the risk of neglecting somewhat the more narrow theme covered by the title.

It will be impossible to cover, in a single paper, all the eye and ear manifestations of syphilis and focal infection, and indicate their points of difference.

We were earlier taught that paresis or paralysis of one or the other of the extra ocular eye muscles was due, in the majority of cases, to syphilis, and were treated accordingly. The results obtained from antiluetic treatment appeared to confirm this teaching. There remained, however, some refractory cases, which were attributed to exogenous poisons, and still others, of unknown origin, that were dumped into the so-called idiopathic class. Since the idiopathic cases frequently developed after exposure to cold and dampness, they were also called refrigeratory, rheumatoid and gouty. Some went so far as to attribute their origin to endogenous poisons, among which, for awhile, autointoxication stood high in the list. Eventually, it was found that they were due to the bacterial toxins which found their way into the general circulation from a focus of infection, often remote from the site of the secondary manifestation. With this discovery, it has been found that the relative number of cases of "focal infection" origin has steadily increased. As to the diagnosis of the cause, in a given case of eye muscle paresis, it is not always an easy matter, particularly in those cases where the Wassermann happens to be negative. In other words, there appears to be nothing about the local manifes-

tation characteristic of the etiology in local conditions of this kind. On the other hand, in the case of involvement of the intrinsic eye muscle, we find Anisocoria and the Argyle-Robertson pupil, characteristic of late syphilis (metalues).

When we come to consider the cornea, there is one disease which, until now, has been considered to be essentially syphilitic. I refer to that condition known as: "Interstital Keratitis," in which there is a non-suppurative inflammation of the stroma of the cornea, found as one of the more common manifestations of hereditary syphilis, that was first described clinically by Sir Jonathan Hutchinson and attributed by him to hereditary syphilis. The average case of this kind shows, classically, the so-called Hutchinson's triad; impaired vision, the end result of interstital keratitis; impaired hearing, the end result of labyrinthitis syphilitica tarda; and the characteristic teeth, with which you are all familiar. There is one feature of the disease that warrants emphasizing, and that is, the tendency for the manifestations to be *bilateral*. The keratitis may start in one eye and remain limited to that eye for quite awhile (several months in some cases) but sooner or later the second eye becomes involved, in spite of vigorous treatment, antiluetic or otherwise. In the meantime, while waiting for the second eye to become involved, to establish the diagnosis, something must be done. In other words, we must arrive at a diagnosis from other signs. Ordinarily, we have them in the triad mentioned above; besides there are other signs of hereditary syphilis; the scaphoid face being one of the more striking. As to the Wassermann test, it is negative in nearly 50 per cent of these congenital cases, according to Browning and Cruickshank [17]. I recall one case of particular interest, that of a colored boy with bilateral deafness, who came to the Polyclinic in Philadelphia in 1922 in which syphilis was recognizable from the character of his deafness. The typical triad, however, was absent and his spinal fluid Wassermann was negative the year before. This case proved to be very instructive before we were through with it. One of the interesting features that developed in this case, which makes it worth citing, is that sixteen hours after a single dose of mercurial inunction, he developed a definitely positive blood Wassermann.

In contrast with the above case, I beg to report, very briefly, the case of an elderly man, referred by Doctor Chas. Tait of Philadelphia. He was suffering from an obstinate non-suppurative inflammation of the cornea, which had been diagnosed and treated as a case of interstitial keratitis, for three months, by a reputable ophthalmologist in Philadelphia. Examination revealed the presence of haziness of the cornea, that was fairly dense and widespread. There was no break in the corneal surface; however, there was the usual unevenness found, as occurs in those cases where the corneal stroma is markedly infiltrated. Around the edge of the corneal opacity one could see a contracted pupil, uneven in outline, and an inflammatory pupillary membrane was present, together with posterior synechias, which told us of the existence of a fairly pronounced anterior uveitis. The age of the patient, the absence of other signs of lues, the *unilateral* involvement, the presence of questionable looking teeth and past experience in several other cases of the kind, prompted me to suspect the eye manifestations to be secondary to a focus of infection in the alveolar process. This suspicion was confirmed by X-ray findings, which was further corroborated by the prompt clearing up of the eye condition following the surgical sterilization of the patient's mouth.

One other case of deep, interstitial keratitis, of focal infection origin, of the several that I have seen, is worth citing. It was that of an elderly woman, referred by Doctor Charles E. Alliaume, of Utica, N. Y. Her chief complaint was that she had been to several eye specialists for refraction of her eyes and none of them appeared to be able to bring up her vision to near normal, with the right eye. The left eye did not bother her. My examination, after spending considerable time on the case, was no more fruitful than that of the others who preceded me. I then checked up all the findings, using much more care than I did at the first examination, when I was rewarded by finding a

very pale, opacity throughout the cornea, like lattice-work, resembling, somewhat, the appearance of the wire screening used in the baseball grandstand to protect the onlookers from foul tips—only the opaque lines were considerably thicker, relatively, than the wire of these screens. This, I had seen before in a few cases of mild keratitis of focal infection origin. It is well to add that there was a pericorneal injection present, so slight as to be hardly noticeable, which assumed a more important role the moment the corneal changes were detected. In looking for a focus of infection, the patient insisted that she had no trouble with her teeth, that they had all been removed twenty years before. Nevertheless, I insisted on an X-ray examination of the alveolar process, upper and lower, when three remaining fragments of teeth, surrounded by pathologic changes in the bone, were found, which accounted for the eye condition. Other cases, more or less like those cited above, could be reported, which would merely add further testimony to the fact that interstitial keratitis can arise from a focus of infection, as well as from syphilis. When it arises from a focus of infection, it is rarely as active as when it occurs from hereditary syphilis. It is usually *unilateral*, in contrast with the syphilitic form, which is *bilateral*, and it is more prone to be associated with anterior uveitis.

Besides the interstitial form of keratitis, I have observed some cases of superficial keratitis as the secondary manifestations of a focus of infection. One case was that of a former secretary, who was affected with recurring attacks of superficial ulceration, always *unilateral* according to her history. The interval between attacks varied from two to five years. Although each attack was limited to a single eye, not every attack hit the same eye, so that when I first saw her, she showed several scattered filmy opacities, which one might judge were the end results of interstitial keratitis, if he were not particularly careful in his examination methods. When I saw her with this last attack, she was suffering, according to her description, the same as with former attacks. There was a marked conjuctival congestion that was mostly bulbar, also a pericorneal injection, hazy cornea and infiltration near the margin, with a small break in the surface, which allowed a positive staining with fluorescine solution. To make the story short, the extraction of a few teeth with infected sockets cut the attack down to three days, which had, on former occasions, lasted several months. This was eight years ago, by far the longest interval between attacks the patient has experienced, with no evidence of recurrence. If time permitted, many other cases of superficial keratitis of focal infection origin could be cited, the essential features of which are as follows: *Unilateral* involvement; *superficial* ulcerations, which tend to *spread superficially*, rather than in the depth of the corneal stroma, as occurs in the infective type of ulcers; *persistency*, for months, in spite of treatment, in those cases where the focus is not removed; *recurrences* are quite common, usually in the same eye, rarely in the fellow eye. This picture is never found in syphilis; therefore, so far as the cornea is concerned, focal infection proves to be more protean in character than syphilis. I have seen cases of dendritic ulcers clear up almost over night, after the removal of a focus of infection.

Scleritis, superficial or deep, was formerly considered to be due almost exclusively to syphilis or rheumatism. Tuberculosis was considered to be almost negligible as a factor. In private practice I have observed, on an average, ten cases or more resulting from a focus of infection, to one from syphilis. Whenever a case of episcleritis or scleritis is seen to center in a spot about eight mm., posterior to the corneal limbus, I feel more than 90 per cent certain that the case is one of focal infection origin, and subsequent improvement, following the discovery and removal of the focus, has confirmed my first impression. This is one of the commonest of eye affections, secondary to a focus of infection. Contrasting the cases of scleritis, of focal infection origin, with those of syphilitic origin, I find that in syphilis the tendency is to involve also the ciliary body and root of the iris, along with the scleral; whereas, in the case of focal infection, there is less tendency to this deeper involvement.

Tuberculous cases are more often secondary to tuberculosis of the ciliary body.

As in all the inflammations of focal infection origin, there is but feeble tendency to spread and a strong tendency to linger and resist treatment. On the other hand, in syphilis, the tendency to spread is very pronounced.

The iris and ciliary body are frequently hit by syphilis and by focal infection disease. The intensity of the inflammation is usually severe from both causes. We find the same plastic exudate, composed mostly of infiltration with small round cells, in both conditions. Posterior synechias and pupillary membranes are common to both. Secondary glaucoma can follow in the one case as readily as in the other. There is, however, one point of difference, clinically, which is a distinct aid in the differential diagnosis, and that is, in the case of syphilis, the condition tends to be *bilateral;* whereas, in focal infection, it tends to be *unilateral.* I recall a cast of bilateral iritis from a double focal infection, one infection in the tonsils, which hit the iris of the right eye three times before I could bring myself to the point of removing the patient's tonsils. Following their removal, the improvement was so rapid and definite as to leave no doubt in one's mind as to the connection existing between the primary focus in the tonsils and the secondary manifestations in the iris. Everything went along very well for a year, when the patient developed an attack of iritis in the left eye, due to pyogenic infection in her bile ducts and gall bladder. This was an odd case, but it helps to explain those rare failures in which the anticipated results have not been forthcoming following the removal of a single focus. It also accounts for the exceptional cases of bilateral lesions from more than one focus of infection.

Choroditis is a common manifestation of syphilis and is almost always *bilateral* and *widespread.* On the other hand, as a manifestation of focal infection, it is *unilateral* and quite *circumscribed;* ofttimes, the area involved is not much larger than the optic disc. Unfortunately, the central area is occasionally hit. Many cases of circumscribed peripheral choroiditis never produce subjective disturbances sufficient to prompt the patient to report to the eye specialist, and are only picked up by him years afterwards, when the patient happens to report for a refraction. Every ophthalmologist can recall many such cases.

Optic neuritis is a fairly common manifestation of both of these diseases. In syphilis, again, it is bilateral, and the retina is infrequently involved, along with the optic nerve. In other words, there is a neuroretinitis present. However, the involvement of the nerve is vastly out of proportion to that of the retina. The optic nerve and retina are more often involved in the syphilitic process than in focal infection. An interesting case of optic neuritis of focal infection origin occurred in the secretary of a consulting dentist. The involvement in this case was quite severe, both from the subjective and the objective viewpoint. The improvement was extremely rapid, following the extraction of a molar tooth. In fact, in all of these cases of focal infection origin, the improvement is very much more rapid than that in the most favorable cases of syphilitic origin. Again, the improvement is not merely subjective, but also objective to the examiner, and, in most cases, very strikingly so, as it was in the case just cited.

As to the ear, both syphilis and focal infection produce characteristic changes in the nervous structures, while late syphilis and focal infection rarely attack any other structures. Several investigators have reported the middle ear findings of still-born syphilitic babes, along with the other pathologic changes in the temporal bone. (Hofer [18], Mayer [19], Asai [20]). Theoretically, these changes should occur more or less in the acquired form, but if they do, no one, so far as I am aware, has described them or told anything about the associated symptomatology.

This leaves only the inner ear and the nerve for consideration. The pathologic changes in the eighth nerve and the inner ear have been quite thoroughly established by those who have studied the temporal bones of infants. In secondary syphilis, there occurs, very often, a bilateral neurolabyrinthitis. The intensity of the involvement is

most marked in the nerve. Gruenberg [21], found the treponema distributed along the vessels and nerves in the perivascular tissues, etc. In the eighth nerve the parasites were found between the nerve fibres, forming parallel layers. In the cross-section of the nerve, they were recognizable as distinct b l a c k points, stained by Levaditi's method. The involvement of the labyrinth is insignificant, as compared with the involvement of the nerve. We note a parallelism in the case of the second nerve, referred to earlier, in which the associated involvement of the retina is but slight. The pathology of the hearing apparatus, in the case of secondary syphilis, is quite distinct from that found in the hereditary form. In a paper on "Neurolabyrinthitis," presented at New Orleans six years ago, I, [22], reviewed the pathology of this process.

The pathology of Labyrinthitis syphilitica tarda, that particular involvement of the hearing apparatus which occurs in hereditary syphilis, is quite different from that found in Neurolabyrinthitis syphilitca.

In the congenital form of luetic deafness, the process is limited to the inner ear, the nerve escaping completely. For a more detailed differentiation of these two conditions, I would refer you to a paper which I, [23], was privileged to present before the Chicago Laryngological society three years ago.

In both of these conditions the involvement is bilateral. It can happen, in Neurolabyrinthitis, that one ear becomes involved somewhat earlier than its fellow, in which case prompt treatment may arrest the disease and thereby, abort the aural manifestations in the second ear. This, however, never happens in Labyrinthitis syphilitica tarda. On the contrary, the development of deafness in this latter condition is very rapid in its onset. I recall one case, in which the patient went completely deaf in one ear and almost completely deaf in the other ear, within three days. The deafness is decidedly more pronounced in labyrinthitis than in neuritis and is more resistent to treatment. In doubtful cases, the differential diagnosis is established by the galvanic test, in which we find the nerve reactive in Labyrinthitis syphilitica tarda, even in those cases which showed negative reactions to the turning and caloric tests; whereas, in Neurolabyrinthits, because of the involvement of the nerve, the galvanic reaction is negative.

Neuritis of the eighth nerve, from focal infection, may occur, but I am inclined to the belief that it is rather rare, for most of the cases of deafness from focal infection, associated with vertigo and impaired vestibular function, the nerve is more reactive to galvanism than it is in the cases of neuritis, with a corresponding loss of function, as determined by the turning and caloric tests. In other words, in deafness, from labyrinthine disease pure and simple, with vertigo, in which there is a marked impairment of function in the semicircular canal apparatus, as indicated by the labyrinthine tests (turning and caloric), the reactability of the nerve is preserved. Clinically, then, the involvement of the ear, in the case of focal infection, resembles very much that which is found in congenital syphilis, with the usual exception that, in focal infection, the involvement is *unilateral;* whereas, in syphilis, it is *bilateral.* I, [24], have observed many cases of inner ear involvement of focal infection origin, one a complicated case in which the patient previously had a middle ear suppuration, which, naturally, made the solution of our problem more difficult.

The one outstanding differential diagnostic sign which I have tried hardest to bring out in the paper, is that in focal infection disease the lesion tends to be unilateral; whereas, in syphilis, they tend to be bilateral. There is, however, an exception to this rule, and that is in the case of gummata, which I have deliberately omitted discussing at this time.

REFERENCES

1 Greely quoted by Hazen. Syphilis, page 23, C. V. Mosby Co., St. Louis, 1919.

2 Daland-Focal Infection in Clinical Medicine. Annals of Clinical Medicine, Volume 11, No. 3, November, 1923.

3 Shemeley: "Syphilis as a Factor in Mastoiditis, Producing Symptoms of Sinus Thrombosis; Report of a Case." The Laryngoscope, October, 1921.

4 Mackenzie: The Report of a Case of Frontal Sinusitis complicated with Profound Syphilis, Amer. J. Syp. Vol. IX, No. 3, July, 1925.

5 Reasoner: Journal A. M. A., 1916, LXVII. 1799-1805.

6 Nichols: Bulletin No. 3, Surg. General's Office, War Dept., June, 1913, page 18.

Nichols: Journal Experimental Med. 1913, XVII, 1232.
7 Neuman, Lester: Non-syphilitic aortitis, Journal A. M. A., Vol. 85, No. 18. P. 1361, Oct. 31, 1925.
8 Alexander: Zur Klinik und path. Anat. der Sog. rheumatischen Facialis lamung Arch. fur Psychiatrie Bd 35 Heft 3.
9 Lezius: Blutveranderungen bei der durch Syphilis bedingten Anaemie. Inaugural Dissert., Dorpot, 1889.
10 Andrewes: Power and Murphy's System of Syphilis, London, 1908, 1, 123.
11 Emerson: Clinical Diag. Edit. 3.
12 Gaillard: Gazet. d. hop. 1885, No. 74.
13 Cabot: Clinical Exam. of the Blood.
14 Muller: Charite Ann. XIV, 259.
15 Weicksel: Munchen. Med. Wochenschrift. 1913, LX. 1170, 1675.
16 Daland, Judson: Lymphocytosis as Diagnostic Sign of Chronic Periapical Dental Infection in Adults. J. of A. M. A., Oct. 22, 1921, Vol. 77, P. 1308-1309.
17 Browning and Cruickshank: Sporadic Congenital Deafness and Deafness from Syphilis; Glasgow Med. Journal. LXXIX. 172.
18 Hofer: Beitr. z. path. Anat. d. Ohres. bei kongenitaler Syphilis. Arch. f. Ohrenh. 1913. XC, 117.
19 Mayer: Histol. Untersuch. z. Kenntnis der Entstch. der Taubheit infolg. von Angebor. Syph. Arch. f. Ohrenh. LX VII, LX VIII.
20 Asai: Beitr. z. path. Anat. d. Ohres bei Leus hered. J. F. Bergmann, Wiesbaden, 1908.
21 Gruenberg: Ueber Spirocheten-Befunde in Felsenbein eines leutischen Fetus. Zeitschrift f. Ohrenh. 1911, 223.
22 Mackenzie, G. W.: Neurolabyrinthitis Syphilitica Trans. of Sect. on L., O. and R. of the A. M. A., 1920.
23 Mackenzie, G. W.: The Differentiation of Neurolabyrinthitis Syphilitica and Labyrinthitis Syphilitica Tarda. Annals of Otology, Rhin. and Laryn. Sept. 1923.
24 Mackenzie, G. W.: Labyrinthitis of Dental Origin; Report of a Case. Eye, Ear, Nose & Throat Monthly, July, 1925.

RATIONAL PROCEDURE LEADING TOWARD DIAGNOSIS *

By RAY KESSEL, M. D.
Charleston, W. Va.

PAPERS that are read and discussed at a State Medical Association Meeting may be grouped under one of three headings: Statistical, authoritative and opinionated. Medical literature is rich in information for those who are interested in statistics and references. The standard clinics are within reach of every member of the profession. The purpose of an opinionated paper is to arouse and stimulate.

Certain aspects of the practice of medicine down through the centuries have not changed materially. Patients continue to call on us for diagnosis, prognosis and treatment. Most patients are eager and anxious for a diagnosis. They desire to know the nature of their trouble, the probable outcome, and what we can promise them from the broad realm of therapeutics. Occasionally diagnosis is easy, frequently it is a difficult and tedious process, and oftimes impossible. Realizing our limitations in this vast field we should strive to improve our procedure in all methods that will tend towards a correct and early diagnosis.

It is not easy to judge correctly. More often we give an individual a higher rating than he or she deserves. Perhaps this virtue works advantageously for the benefit of the profession. Our friends and patients usually give us credit for knowing more than we actually know. If this were not true how would a physician build, establish and retain a private practice. When I lapse into a morose state of mind, and am not responsive to the environment about me, I sometimes speculate as to what action my patients would take if they could analyze me and see the inferiority of the clay.

Does the physician of today occupy the same status in his community as did the physician of former years? Apparently he does not receive the loyalty and cooperation from his patients in as full a measure as did his predecessors. Some of the reasons that are responsible for this change of feeling are: 1. Commercialism has replaced to a certain extent idealism; this attitude has been forced upon the profession for self preservation. 2. Society has been very restless the past decade; we have been vacillating rather than

* Read before the fifty-ninth annual meeting of the West Virginia State Medical Association, at Bluefield, June 10, 1925.

stabilizing. 3. The increase and diffusion of knowledge among the masses. 4. Indifference on the part of the profession with regard to tact and thoroughness. 5. Erroneous ideas of the laity as to the value of the special branches of medicine. 6. False doctrines that are promulgated by the followers of pseudo-scientific medicine. 7. Unguarded statements from within the profession which are capable of doing much unrecallable mischief.

The desire to be successful is nourished by the majority of all normal men and women. Naturally members of the profession use various plans to secure the patronage of the individuals of society. As a rule these plans are wholesome and desirable. Each physician should study his own frailities and use his talent to the best advantage. Originality is much safer than a free indulgence in imitation; attempting to assume the personality of an eminent character frequently results in disappointment to all concerned. Simplicity and frankness are valuable assets to the physician.

In order to carry the trend of thought we shall accept, as a fact, that the radiations of the physician's knowledge and skill have gone out with sufficient penetration; that the patient feels that a visit to the physician will result in being benefitted.

How shall the physician receive the patient when he or she compliments him by coming to his official headquarters, the physician's office? The reception room is the first chamber the patient ventures into. The most essential attribute of the reception room is his lieutenant, the office secretary. Her sagacity and diplomacy go a long way towards putting the patient at ease while the physician is absent or busy. A competent office secretary is an invaluable ally. She can expedite office visits and economize time. She can secure information that may be of future value. As she admits patients into the consulting room she can make the necessary introduction, and as they depart she can give them a good-bye that will be conducive to their coming again.

The first five minutes the patient is in the consulting room is the most impressive part of their visit. The physician should endeavor to receive the patient pleasantly and to get seated comfortably. Whether or not the physician takes the active part in the beginning of the conversation depends upon the attitude of the patient. All efforts should be directed towards gaining or retaining the patient's confidence. Without this confidence we cannot hope to succeed. After the patient has become adjusted to the privacy of the consulting room it may be advisable to encourage the patient to tell his complaint with regard to his present illness. Patients appear to be more comfortable after they have told their story. At times the recital of symptoms will be incoherent and irksome. If the physician will be patient he can gain information that is of vital value. If the patient's trouble is of an obscure or malignant nature the physician is duty bound to go into details for subjective and objective symptoms, in order that he can logically group them and study their significance, thereby placing himself in a more favorable position to reach an accurate diagnosis. The suggestions and criticisms that have been offered by medical thinkers, as to how, when and where we shall secure this information would fill many volumes. Each physician should have mastered some practical and useful routine for the study of his diagnostic problems.

I shall have distributed and shall discuss some of the major points on a four page history chart that I have been using the past two years. This chart was formulated by two associates and myself because we desired a chart that was applicable to our needs. This chart has its defects, but it is the most desirable I have ever used. On the first page there is ample space for a complete social history, this information may be of value to the physician in his future relationship with the patient. Three lines are allotted to the patient's complaint. Under "present illness" certain statements are entered that may or may not be of value, nevertheless they are listed. Inquiry is made into family history, here much is left to the discretion of the physician. Questions are asked relative to diseases of childhood as well as other common diseases. The digestive, respiratory, cardiac, nervous and renal systems are considered.

With women patients, if indicated, the menstrual history. The chart so far has to do with what the patient wishes to tell. It is a one angle view, a grand-jury process.

On physical examination general impressions are considered: Temperature, pulse, respiration and color of skin. Attention is directed to lungs, heart, abdomen, genitalia joints and reflexes. Laboratory findings are placed last where they rightfully belong. Sufficient space is given diagnosis, treatment and end results.

For a history chart of this size several visits may be necessary before it is completed. When once completed it is of great value to both physician and patient. I do not always complete a chart in every detail, for frequently it is not necessary. A chart serves me at least two ways—written tabulated information, and the controlling effects of routine in my work. Perhaps there are physicians who are opposed to the use of history charts, to them they appear as red tape and unnecessary. In all phases and avenues of life we see routine and system. Within recent years the better class hospitals have adopted some practical form of a history chart for all patients admitted. It is difficult at times to secure a rational personal history due to ignorance or concealment of facts. With women patients we should exercise judgment in suggesting and making physical examinations.

Diagnosis may be difficult because the symptoms are puzzling or obscure. Characteristic symptoms may not have appeared early in the illness. During a mixed infection the physician may be undecided for a while as to which is the primary and which is the secondary infection. The rarity of a disease may prevent an early diagnosis. Incomplete history may retard a physician from arriving at a correct diagnosis. Drug symptoms may simulate certain diseases. A physician who is not a keen observer and a good reasoner can not hope to attain a high standard in diagnosis. A vacant facial expression or an anxious facial expression means much to the careful observer and thoughtful reasoner.

Diagnosis is more than merely naming a disease. Diagnosis is the discrimination of diseases by their distinctive symptoms. A good diagnostician must have trained powers of observation, accurate clinical experience and must possess a working knowledge of chemistry and biology. Diagnosis should include a knowledge of the causes of disease, determination of its character with reference to type and severity, an estimate of local and general damage of the body, a forecast of probable course and duration, knowledge of personal characteristics of the patient. "Diagnosis demands facts, truthfully recorded, intelligently sifted and viewed without bias." The final object of diagnosis is to be able to treat the disease intelligently.

A very essential factor in considering diagnosis is differential diagnosis. In fact it is impossible to do diagnostic work without entering the field of differential diagnosis. It is much easier to say what isn't than to say what is. We have all seen patients who present a clinical picture that on first impression could be given a variety of diagnostic names. A safe conclusion can be reached only after a thorough study.

There is much difference of opinion among the members of the profession as to what course to pursue when clinical evidence and laboratory reports do not coincide. In the majority of instances I prefer to be guided by clinical evidence rather than by delicate tests. Each problem for study should be handled on its merits. Occasionally it may be necessary to do a therapeutic diagnosis. I recall a few instances where such diagnosis kept me from utter failure.

I am not in sympathy with what might be termed "Spectacular" diagnosis, of which we are all familiar. The last physician who sees the patient has the advantage of those who have preceded him. The more learned the physician is the more careful he is not to have his opinion magnified. The thoughtful, thorough physician is usually a serviceable physician.

Consultation for diagnosis is not always what it could be. Consultation for any purpose sometimes falls short of its goal. Physicians are a sensitive group of men, and until their personalities change, consultations

will continue to be at times disappointing to all parties.

After we have grouped the symptoms and signs of the patient, how shall we weigh the evidence, how we are going to reach a decision, what will be our manner in giving our opinion to the patient or the patient's family? I shall leave the answer to these questions to each of you to answer as you see fit.

DISCUSSION

DR. THOMAS G. TICKLE, Bluefield:

You have just listened to Dr. Kessel's excellent paper on rational procedure toward diagnosis, and he has said that laboratory diagnosis should come last. In cities and towns today there is a passion for apparatus, sometimes merely as stage scenery, which is on a rapid increase. There is a yearning for X-rays, ultraviolet rays, various lamps, a private laboratory, a basal metabolism machine, and the many other diagnostic and therapeutic instruments which science has evolved and still is evolving. Many mechanical devices are necessary in practical medicine, more than the average physician, or even the physician who is far above the average, can afford to purchase. The X-ray machine, basal metabolism machine, the electrocardiograph, and many other complex diagnostic and therapeutic instruments, as mentioned before, are necessary for scientific purposes. But it is a mistake for many of these to be owned by one physician. No business man can afford expensive machinery which is not in frequent use and which quickly becomes out of date. The machine of physicians likewise quickly becomes obsolete and when outside a hospital it should be largely co-operatively owned in a building which is a medical center. There should be fewer and better private laboratories, and more highly trained persons for utilizing and interpreting this costly equipment.

Finally comes the old observation, the laboratories and the machines are likewise fallible. First in medicine comes clinical skill, which presupposes a thorough training of a person who is capable of applying the laws of probabilities.

DR. C. A. RAY, Charleston:

I want to thank Dr. Kessel for this excellent paper. If I had had information like that thirty-five or forty years ago, I might have been as good a doctor today as he is now. There is one phase of his paper I want to discuss just for a minute. At the same time, the same phase is in the masterpiece by Dr. Barksdale—that is, the point of telling a patient the truth about his condition. I hear in so many papers the conclusion: "What are you going to do about telling your patient?" There are two things I learned when I was a boy. My mother taught me not to fight, and always to tell the truth. I have followed that up in my profession, and I have never failed, and I think it is a mistake in any doctor not to tell a patient the truth about his condition at the time he examines him and comes to a conclusion and knows he is right about it. I think it is a duty we owe to our patients, and that we should always tell them. We need not tell them bluntly that they have high blood pressure and may have a paralytic stroke tomorrow. I try to tell them tactfully. Tell them: "You have been a good old wagon, but a spoke is getting loose; better get in the shade and pour some water on." Tell them they are getting old and had better slow down a little. What are you going to do if you do not tell your patients they have incipient tuberculosis? The time for them to be treated is *now*. The impression I want to leave with you, the experience that I have had, is that you had better get the truth over to your patient in some way.

DR. KESSEL, closing the discussion:

In closing, about the only thing I wish to emphasize is that Dr. Irwin suggested to me a few minutes ago that, from the standpoint of our delicate tests in the laboratory, it is worth while to give due attention to those tests that are positive; that they are of value; they are not misleading. It is those tests of a negative nature that, to a certain extent, should be cast aside, and more attention paid to clinical evidence and clinical deductions.

[EDITOR'S NOTE—We regret that lack of space prevents publication of the excellent chart used by Dr. Kessel. It is complete and a copy will be sent by the Doctor to anyone interested.]

CHRONIC NEPHRITIS, SPECIAL REFERENCE TO CLASSIFICATION AND TREATMENT *

By G. H. BARKSDALE, M. D.
Charleston, W. Va.

CHRONIC NEPHRITIS to the average physician means a disease of the kidneys characterized by the presence of albumin in the urine. The usual instructions to such patients are: Cut out red meat, and probably as an afterthought, don't use any salt. If our mental workings could be read they would probably disclose the fact that the most of us know nothing of the real nature of the disease, feel that nothing can be done about the matter anyway, and why bother? We should bother because something can be done and it can be done by you and me just as well as in certain great clinics and sanitoria.

The object of this paper is to standardize for myself and those who care to read a line of treatment which is free from vagaries and represents the best thought of those interested in the subject. Nothing is more baneful to the welfare of the profession at large than the lack of uniform thought. For example: If the intravenous use of mercurochrome in blood steam infection is a good thing, then we all should use it. If it isn't, then none of us should use it. Further, it is my profound feeling that we have no moral right to acclaim a measure good because one knows of one or two cases that have apparently done well under such treatment. We must look to the great clinics, teaching hospitals and laboratories for guidance. Standardization of therapy will strengthen the profession immeasurably.

The classification of chronic nephritis has always been most satisfactory, primarily because such classifications have generally been based on refinements of kidney pathology, as noted, post mortem. This would be all right if certain kidney pathology could be definitely correlated with the clinical symptoms and course of the disease. Unfortunately, this cannot always be done. A working classification ante-mortem should anticipate the pathology post-mortem; the post-mortem findings should reflect the ante-mortem symptoms and course. The most practical classification for the most of us is that suggested by Christian, and Warfield has further simplified this classification. The latter seems eminently satisfactory.

Chronic Nephritis:

1. With edema (wet).
2. Without edema and with vascular hypertension (dry).
3. A combination of one and two.

Concerning its pathological physiology one can do no better than to quote Mix, who states it most tersely as follows:

"Our modern concept of the kidney is that it is an organ of filtration and resorption. The glomeruli, particularly, Bowman's capsule, constitute the filtration apparatus, the tubules constitute the organs of resorption. Nature is wonderfully economical, and so when Bowman's capsule filters through too much water and valuable basic salts the tubules resorb such proportion of the water as is necessary and they also re-absorb the valuable basic salts. The result is that the urine is always of a certain approximate specific gravity, and of practically constant chemistry. When disease affects either of these parts of the kidney, trouble begins. If there be disease of the glomerular apparatus, if Bowman's capsule becomes clogged and unable to filter, we have a retention of body fluid with a production of edema. If on the other hand, the filter works all right, but the tubules are diseased so that resorption does not take place, we have a larger amount of fluid than normal passing from

* Read before the Kanawha Medical Society at Charleston, April 20, 1925.

the body, a condition of polyuria. There is of course in these latter cases, no edema whatever. Depending upon the involvement of these two distinct parts of the body some clinicians have been content to merely describe kidneys as either wet or dry, the wet kidney being the kidney of glomerular involvement, the dry kidney being the kidney of tubular involvement; the term "wet" having reference to the associated edema and the term "dry" having reference to the associated absence of it. These two terms, wet and dry, describe fairly accurately the broad outline of kidney disease.

It is to be noted that as simple as the above seems, one must bear in mind that chronic nephritis with edema (the edema being solely of kidney origin) is comparatively a rare condition. Christian states that in 1,650 cases of chronic nephritis there were only about five such cases. In the vast majority of instances the edema is cardiac and not renal. Belle and Hartzel after a careful study of the glomerular, or wet nephritis, conclude categorically, "All forms of glomerular nephritis are due directly to bacterial invasion of the glomeruli." The vast majority of these cases get well promptly. However, a certain number of them instead of clearing up steadily progress to fatal termination in two years. The remaining very few make up the five cases of Christion's 1,650 of chronic nephritis with edema, the edema which is purely nephritic. In short, this process is the true nephritis and of bacterial origin. Such cases pass from the acute to the subacute usually terminating before becoming truly chronic. The dry form, on the contrary, is purely a degenerative disease of the cardiovascular system with special predilection for the kidneys. This is evidenced by hypertension which in turn brings about widespread disturbance in the peripheral small arteries with either spasmodic or organic reduction of their bore. Such degenerative changes are noted in the eye grounds, thickening and tortuosity of the radials and brachials, the aorta is dilated and the heart is enlarged. The wet cases terminate usually in uremia, by retention of products which should be eliminated. The dry is apt to terminate by heart defeat or cerebral hemorrhage. Etiologically the wet cases, as noted, are those that have been preceded by definite infection; throat, ear, scarlatina, or what not. The dry cases have for their etiological factors those toxins and by-products which have to do with vascular disease in general, such as the by-products of faulty metabolism, fatigue, dissipation and excess in general, toxins from the intestinal tract, or elsewhere.

Concerning the treatment of chronic nephritis, I will say that if we are to truly affect the mortality from this disease, which is approximately 7 per cent, our patients must profit by their periodic health examinations. A comparatively young person with a slight band of albumin whether transient or not, is not a good risk, another with a snappy aortic second, blood pressure 150/100, some headache or not, and nervous, is also poor. The insurance companies don't want these potential nephritics. They reason in figures. It is our place to struggle with these cases while they are yet mild nephritis, not wait until the disease is no longer properly nephritis, (inflammation of the kidney) but kidney disfunction. If one stops to reflect, chronic nephritis is kidney disfunction and comparable only to a decompensated heart. The nephritis is comparable to the endocarditis that has passed. It is my feeling that every so-called febrile albuminuria is a mildly acute nephritis. I don't do it, but know that I should know, that all such patients are albumin free before they are allowed up. Functional tests, and blood chemistry are of little or no value here; our criterion here is whether they have or have not albumin and cellular elements. If they have, search for and remove all foci of infection, septic teeth, diseased tonsils, pyelitis or other possible sources of infection. If the disease is still active, assist elimination and dilution of the toxins by all reasonable measures. In general, we do not keep children in long enough after acute fevers, whatever the cause may be. Tonsilitis, in my opinion, is the most serious disease we have among those which are commonly classed as mild diseases. It takes first place in the production of acute nephritis. Hill reports in 81 such cases, tonsilitis as the

etiology in 22. Acute disease of the throat and respiratory tract come next. Influenza however does not seem to have been an important causative factor. Pepper, speaking of obscure causes, says "In a case of acute nephritis following otitis media, I have seen the nephritic process continue until after a symptomless infection of the mastoid air cells was eradicated."

Considering the treatment of chronic nephritis, one should, as in the prophylactic treatment, attempt to remove all sources of toxemia or bacteremia in the hope that the disease may be arrested. The load on the kidney at least will be lessened. Having done all possible to right the patient, diet comes as our first consideration. O'Hare has the following to say:

"We all ought to know that in nephritis the body has more or less difficulty in handling water, salt and nitrogen. We know that if we give much water or salts these substances will be retained and the swelling increased in the edematous type of the disease. In the hypertensive case, we are certain that too much protein intake will be followed by an accumulation of nitrogen in the blood." If this is so, why do we not make use of these facts in treating our nephritic patients? Why force 3,000 c. c. of fluid on kidneys that can scarcely handle 600 c. c.? Why give 100 gms. of protein when the patient can take care of only 40 gms.? Why give 6 gms. of salt when 4 gms. of it is going to be retained? As true as the above may be, Christian admits that our dietary management of chronic nephritis is almost entirely empiric.

O'Hare has formulated a diet list which is the most valuable contribution to the dietetic handling of nephritis that I have ever seen: (*Journal A. M. A.*, Nov. 10, 1923, and *Oxford System Medicine*). By use of the list the protein intake in grams can be simply and accurately controlled. For all time, patients have been warned that red meat should be avoided, just why, no one seems to know. In fact, it makes no difference in what form the protein is taken, the amino-acid radicals are the kidney irritants. In selecting food, it is purely a matter of protein percentage, roast beef is 20 per cent protein, roast chicken, 20 per cent, fat pork chops 15 per cent, fish 18 to 23 per cent. Unless the matter of one's digestion or preference comes up, don't bother about whether the protein is red or white meat, fish or fowl. Concerning the amount of protein per day, I gather the following: If the blood urea nitrogen is elevated, the total protein intake should not exceed 25 grams per day. If while on treatment, the blood urea nitrogen goes down to below 15 mgms. per 100 c. c. the protein may be pushed up to 50 for the severe cases, and not to exceed 75 in any case. If one restricts the protein too much, marked anemia is most likely to follow. Osler recommended the use of Basham's mixture as routine for the anemia of nephritis.

The fluid intake is to be controlled largely by the patient's thirst and his ability to maintain a normal output in proper relation to the intake. I quote the following: 800 c. c. and 2,500 c. c. as the minimum and maximum figures for normal urination. The old idea of flushing out the kidneys is no longer sound, while definite evidence is lacking it is thought by many that very definite harm may be done a crippled kidney by such procedure. Frothington regulates fluid intake as follows: "In chronic nephritis the fluid intake should be restricted to about 800 to 1200 c. c. in all cases with edema, but in those cases which put out water well, the fluid intake may be increased up to 2,500 c. c. with the idea that in this manner substances are brought to the kidneys in a more dilute form for excretion."

If the patient is being purged and sweated, this must be allowed for in prescribing the amount of fluid.

Salt—It has been definitely established that the edema can be altered by varying the salt intake. A theoretic consideration of the subject however is beyond the scope of this paper. If there is edema the salt should be kept low, in a mixed diet which is selected to contain as little salt as possible and which contains sufficient calories to maintain strength, there are about 2 gms. of salt. Such a diet becomes unpalatable after too long a stretch, so that some salt must be added to the food, 2 gms daily renders the diet fairly palatable. In the dry cases, it is also well to keep the salt at a fairly low level

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA

as it has been shown that the kidney's ability to put it out is somewhat diminished if the process is at all advanced. It is doubtful if too stringent reduction of salt over a considerable time is practicable; however, an advanced nephritic of the wet type in whom digitalis, if indicated, has failed to reduce the edema, should be placed on a so-called salt-free diet, (chlorides, 1 gm. in 24 hours), and this maintained for two weeks; by this time it will be seen whether it should be continued.

The matter of the use of diuretics is a mooted question. They usually don't work. If they do, is the general condition improved? Caffeine may prove most valuable. It has the dual function of affecting the kidney permeability or resorption ability directly, also that of a cardiac stimulant. Digitalis is not to be regarded as a diuretic. Its entire effect is expended on the heart. One writer has well said: "It allows rather than stimulates the kidney to excrete better."

Novasurol is the diuretic of the minute. The reports are that it is a most powerful eliminant in all forms of edema, especially so if the urine is previously acidulated by ammonium chloride.

Catharsis, sweating, hot baths, general instruction in hygiene as to temperate living, eating, drinking and dissipation, all come in for general discussion. They all have their place in the general handling of the chronic nephritic.

SUMMARY:

(1) The lack of standardized methods of treatment, manifest deplorable weakness on our part.

(2) The classification of nephritis as recommended by Christian, while open to certain criticism, gives us a most excellent working basis as applied to treatment.

(3) The earlier potential nephritics are recognized, the better chances for cure or arrest.

(4) Diet is probably our most important therapeutic measure. I refer particularly to the ingestion of protein, salt and water.

ACUTE PARENCHYMATOUS NEPHRITIS *

By W. ROSS MORRIS, M. D.
Alpoca, W. Va.

THIS is an old subject and comparatively recently only very little has been added to our knowledge in regard to it. So then it is likely that nothing new of great importance will be brought out in this paper. But only through repetition do we reach perfection so this may not be time ill spent.

Strictly speaking, acute parenchymatous nephritis mean inflammation of only the glomeruli and tubules, but in my opinion in an acute nephritis the inflammatory process is never limited to one anatomical element but involves to a greater or less extent, all of the elements, the glomeruli, the tubules, and the interstitial tissue. In this paper therefore, will be discussed acute diffuse nephritis.

Acute nephritis is the precursor of a very large percentage of the cases of chronic nephritis. This fact impresses upon us the very great importance of the prevention of acute nephritis and its proper treatment when it does occur, for by doing this to the very best of our ability we can materially reduce that large group of chronic nephritic patients which we have constantly with us and whom, we are able only very unsuccessfully to treat.

Etiology

[1]Cold. Exposure to cold and wet is one of the most common causes. The exact mechanism in this case is not definitely known, but it seems likely that the inflammation is a compensatory overwork phe-

* Read as part of a symposium on Nephritis at the regular meeting of the Mercer County Medical Society, March 25, 1926, Princeton, W. Va.

nomenon produced by the decrease in the elimination of waste products through the other channels of elimination, the skin, bowels, etc.

[2]Toxic agents, such as turpentine, cantharides, potassium chlorate, carbolic acid, arsenic, mercury, etc., if taken in large enough amounts will produce acute nephritis. Alcohol alone probably never produces an acute nephritis.

[3]Acute nephritis occurs sometimes as a complication of pregnancy. Here the nephritis is probably due to toxic products, which are not as yet definitely determined.

[4]Occasionally acute nephritis occurs in connection with extensive skin lesions, as in extensive burns or in skin diseases, as psoriasis or exfoliative dermatitis.

[5]Infections. In the vast majority of cases some form of infection is the etiological agent. It is frequently secondary to the acute infectious diseases, especially scarlet fever, diphtheria, acute tonsilitis and infection of the paranasal sinuses. It occasionally follows measles, varicella, empyema, typhoid fever, acute diarrheal diseases, pneumonia, meningitis, influenza and malaria. It may occur in septicemia and may be associated with acute tuberculosis or syphilis. In some of these cases the inflammation is caused by the irritation from toxins formed; but usually there is in addition, the entrance of pathogenic organisms carried by the circulation.

Morbid Anatomy

The kidneys are usually enlarged, soft and edematous, the capsule is non-adherent. The cortex is thickened, either reddened or pale and frequently shows a red mottling due to the presence of small hemorrhages. The entire organ may show intense congestion, or the pyramids may seem unusually red by contrast with the pale and thickened cortex.

Microscopically, is seen an inflammatory process involving all the structures of the kidney-glomeruli, tubular epithelium and interstitial tissue. The cells covering the glomerular tufts of capillaries are swollen and proliferated and have frequently undergone fatty denegeration. The epithelial cells lining Bowman's capsule may undergo the same changes, but usually to a less degree. There may be a collection of exfoliated epithelium, cell-detritus, leucocytes and red blood cells in the space between the capsule and the tuft. The tubular epithelium undergoes albuminous and fatty degeneration and may be desquamated, thus the tubules may contain serum, leucocytes, red blood corpsules and casts. The interstitial tissue is infiltrated with serum and small round cells and in cases of longer duration there may be permanent general connective tissue increase.

Signs and Symptoms

The onset is usually sudden, with chilliness or rigors, high temperature, and fast pulse. But after fevers the onset is usually less abrupt, the patient gradually becoming pale and edema in the face or ankles is first noticed.

Pain in the back, nausea and vomiting may be present. In children there may be convulsions at the outset, diarrhea may occur and nervous symptoms as restlessness, muscular twitchings, etc., are often marked. The temperature is variable, ranging from 100 to 105 degrees. In the secondary nephritis of acute infectious diseases the general symptoms are often marked so that if the urine is not examined the condition may be overlooked. In these cases the nephritis usually appears during the third or fourth week of the disease or even later.

While edema is usually present, it may be slight or absent in severe and even in fatal cases. It appears usually first in the face, then feet, legs and scrotum. There may be general anasarca, with effusion into the serous cavities of the body, the pleura or the peritoneum, rarely the pericardium. The lungs may become edematous and there may be edema of the glottis, Epistopxis may occur. As the disease progresses there is always a very marked degree of anemia. The blood pressure in the latter stages is elevated. The skin is often dry and it may be difficult to induce sweating. Ocular changes are not so common, but hemorrhagic retinitis may occur and occasionally papillitis.

The most characteristic symptoms are the urinary changes. It is usually greatly di-

minished in quantity and may be suppressed. It is of a dark reddish brown or smoky color, of a high specific gravity, and on standing there is a heavy deposit. It is acid in reaction. Albumin is invariably present, although not always at first; it is usually in large amounts. Microscopically are found leucocytes, red blood corpuscles, epithelial cells and casts. The cases are of the hyaline, finely granular, coarsely granular, epithelial cell, pus cell and brown granular, which are characteristic types. The total excretion of urea is reduced but the percentage is high. The blood urea is increased, the amount of chlorides in the urine is decreased, while that in the blood is increased.

The phenolsulphonephthalein kidney function test is of help in determining the severity of the nephritis.

The active symptoms in cases terminating in recovery usually last from one to three weeks. Temperature and dropsy gradually subside. Improvement in the urine is shown by increase in quantity, by an increased urea output and by a diminution in the amount of blood, albumin, and the number of casts.

In graver cases the symptoms continue to grow worse until uremia appears. This is often manifested by very scanty or suppressed urine, vomiting, great restlessness or apathy. There may be headache, dimness of vision, stupor developing into coma, or convulsions. If the secretion of urine is re-established the nervous symptoms abate and the patient may recover. Not infrequently there is hyperpnea which, is usually evidence of acidosis.

One must be on the lookout for certain complications which may arise. The most frequent are pneumonia, pleurisy, pericarditis, and endocarditis; more rarely meningitis and edema of the glottis. It is from acute uremia or complications that death usually occurs.

Prognosis

The majority of patients survive the acute stage and often even those who have shown symptoms of uremic poisoning. The quantity and specific gravity of the urine, the elimination of phenolsulphonaphthalein and urea, and the number and variety of casts are the best guides in prognosis, much better than the amount of albumin. In general if there is no suppression of urine, if there are no symptoms of uremia, and no complications, recovery is very likely.

As to the danger of development of chronic nephritis. It was formerly thought that this was a rare sequel, but experience has shown that such is not the case. A very large number of the cases of chronic nephritis are caused by and develop from acute diffuse nephritis.

Treatment

Prophylaxis. This is most important. By the prevention of acute infectious diseases we can very materially decrease the number of cases of acute nephritis. In diphtheria antitoxin and scarlet fever antitoxin we have two most potent agents not only to prevent diphtheria and scarlet fever, which are two of the most common causes of acute nephritis, but also to cure developed cases of these two diseases before any material damage is done on the kidneys by the toxins plus bacteria. The importance of diphtheria antitoxin and scarlet fever antitoxin used early, energetically, and efficiently in the prevention of acute nephritis can hardly be over emphasized.

In developed cases of acute infectious diseases, by prolonged rest in bed, low protein diet, and the active stimulation of the other channels of elimination, chiefly bowels and skin, we can greatly reduce the probability of acute kidney involvement.

In sodium—thiosulphate we have a very valuable remedy for use, in cases of ingestion of metallic poisons, as mercury, arsenic, etc., and by it's energetic use in these cases we can greatly decrease the likelihood of acute kidney involvment, or its intensity if it does occur. The sodium-thiosulphate is given in very large amounts per dose and intravenously. It unties the metals forming inert nontoxic chemical compounds which are eliminated as such.

Treatment of a developed case. Rest in bed between warm blankets, on a salt free, low protein diet is absolutely essential. The best diet is milk and very little food besides this should be allowed till improvement is

shown. Then bread and butter, broths, fruits, etc., may be added. Milk and water are probably the best diuretics and so as large amounts as possible should be taken. The intake of water however must be governed by the urine excreted and edema. If the kidneys can not excrete it, water should not be given because it simply increases the edema and make matters worse. It should therefore be forced to the limit, that is as much as will be excreted and not increase edema.

The bowels should be kept open by a morning saline, magnesium suphate best, and more often if necessary; thus securing all elimination possible by this avenue. Free elimination through the skin should be secured by frequent sponging, warm baths, hot air, hot packs, etc. Counter-irritation over the kidneys by a mustard plaster or heat is often helpful.

For the anemia iron should be used per os or preferably intravenously or intramuscularly. This however should not be used till the acute symptoms have subsided.

In case of suppression of urine with development of uremic symptoms—delirium, vomiting, diarrhea, and a high tension pulse-venesection, free catharsis and sweating should be carried out at once. From 500 to 800 c. c. of blood should be withdrawn and about the same amount of normal saline given intravenously. Several loose stools should be obtained by administration of magnesium sulphate. Secure free sweating by hot packs, and if the lungs are clear, pilocarpine may be used. High colonic injections of large amounts, two quarts or more of hot plain water, often helps in the establishment of a free flow of urine. Morphine hypodermically is of great help in the prevention of uremic convulsions.

One should be constantly on the lookout for complications, especially effusion into the serous cavities, pericarditis, and edema of the lungs.

As regards diuretic drugs, in general very little is acomplished by the older diuretics and harm may be done. Occasionally caffeine citrate per os or caffeine sodio-benzoate subcutaneously or diuretic per os will help, but these should be used only in selected cases. Digitalis should be used if myocardial symptoms appear.

From our work of Keith, Barrier and Whelan, at the Mayo Clinic, and others we know that in calcium chloride, ammonium chloride and novasural we have three very potent diuretics for use in the removal of the edema in cases of chronic and subacute nephritis, and in selected cases of acute nephritis. By the use of one or the other of these drugs, or the combination of one or more of them with diet, therapeutic results never previously possible have been obtained. It seems that calcium and ammonium chloride possess about the same efficiency as diuretics, but ammonium chloride has a great advantage in its ease of administration. In many cases calcium chloride produces nausea and vomiting, while these symptoms are much less frequent and troublesome after ingestion of ammonium chloride.

I have used calcium chloride in treating general anasarca, in one case of subacute nephritis following scarlet fever, with apparently good results.

No case should be discharged until the urine remains negative, and then for two or three years the patient should have an occasional urinalysis.

Finally then let us bear in mind that by an intelligent, energetic and conscientious use of our present knowledge in regard to acute nephritis, we can not only greatly reduce the number of cases of the disease but so treat the developed cases that the vast majority will have a happy termination in recovery, and not continue on into a chronic nephritis which, we can only so unsuccessfully treat and which takes such a heavy toll of human life annually.

REFERENCES

1 Keith Barrier & Whelan: Treatment of nephritis and edema with calcium, J. A. M. A. 83: No. 9: Aug. 30, 1924, 666-670.

2 Keith Barrier & Whelan, the diuretic action of ammonium chloride and novasural, J. A. M. A. 85: No. 11: Sept. 12, 1925. 799-806.

3 Osler: The Principles and Practice of Medicine, Eighth edition.

4 Holt: Diseases of Infancy and Childhood, Seventh edition.

5 MacCallum: A Text-book of Pathology.

6 Clausen, S. W.: Parenchymatous Nephritis, Amer. J. Dis. of Children, May, 1925. Vol. 29. P. P. 581-602.

PAINLESS CHILDBIRTH *

By NATHAN POLIAKOFF, M. D.
Huntington, W. Va.

THERE HAS EXISTED, from time immemorial, the cry of the woman in labor for some relief of the pains of childbirth, and especially is this true of the primipara. Physicians have tried various drugs, only to discard them one by one on account of the deleterious effect on the mother, the child, or the progress of labor.

In 1902, Steinbuchel introduced Hyoscine-Morphine, better known as 'twilight sleep," for the purpose of relieving the pains of childbirth. This method of amnesia and analgesia was tried in the large maternity hospitals both in Europe and in this country, but was soon discarded on account of the dangers to both the mother and child.

However, Dr. Schwartz, of the Barnes Hospital, St. Louis, states that the "Twilight Sleep" method has given them very satisfactory results in quite a number of labor cases for the past ten years. The restlessness which this method causes (in twenty-five to thirty per cent of the cases) is overcome by the use of magnesium sulphate intramuscularly.

As Gwathmey and his co-workers have shown that magnesium sulphate has a depressant effect when used in smell doses and that it has a definite synergistic effect when given with certain other drugs, so that doses much smaller than the anesthetic dose will produce considerable analgesic effect when injected subcutaneously or intramuscularly. This synergistic effect is supposed to be more marked when magnesium sulphate is used with morphine. Weston and Howard have also shown that small doses of magnesium sulphate have a sedative effect when given subcutaneously or intramuscularly.

Many physicians use morphine-magnesium sulphate in the first stage of labor and nitrous oxide gas with oxygen during the entire second stage, but this method requires someone who is skilled in administering gas-oxygen analgesia.

The method of relieving the pains of childbirth which has met with the greatest success, is the one that has been used at the Lying-In Hospital of the City of New York for the past two and one-half years in over 1700 cases in the hospital and 400 cases in the Out-Patient Department. This method can be carried out by any physician in a home as in a hospital and so far, has proven to be a safe method for relieving the pains of childbirth.

I have here attempted to outline this method as briefly as possible:

1. When the patient goes in labor, the usual soapsuds enema is given followed by tap water enemas until the lower bowel is clean. This is absolutely essential for the instillation, to be described later.

2. When the contractions are strong, coming about every five minutes and lasting about thirty seconds and the cervix is about two fingers dilated an intramuscular injection of 2 C.C. sterile 50 per cent solution of magnesium sulphate and one-fourth grain of morphine is given. The morphine tablet can be dissolved in a little boiled water, then drawn into the syringe containing the magnesium sulphate solution. A long needle (1½ inches, 19 gauge) is inserted deeply into the gluteal, deltoid, or subscapular region and the solution injected as the needle is gradually withdrawn. The gluteal region is the one preferred and the injection is given during a pain. After the injection the patient is kept as quiet as possible, all extraneous stimuli, as loud noises, bright lights, etc., are to be avoided at this time, in order to favor a natural falling asleep.

* Read before the Cabell County Medical Society, Huntington, March 25, 1926.

3. One-half hour after the first injection a second intramuscular injection of 2 C.C. of 50 per cent magnesium sulphate (without morphine) is given. This second injection is given regardless of whether the first injection is sedative or not, as the second injection tends to prolong the action of the morphine. Dr. Davis of the Lying-In Hospital, states that even if delivery is expected within two hours, these injections may still be given, and even if birth should take place one hour after the injection, no harm comes to the baby.

4. If there is no relief within twenty minutes after the second injection of magnesium sulphate, the following retention enema (ether instillation) is given:

Quinine (alkaloid) 20 grains.

Alcohol, 45 mins.

Ether, 2½ ounces.

Liq. Petrolatum (heavy q. s. ad.) 4 ounces, or olive oil.

The ether instillation is preceded and followed by an ounce of Liq. Petrolatum or olive oil. The instillation is never given sooner than fifty minutes after the first magnesium-morphine injection.

5. Immediately after the ether instillation a third intramuscular injection of 2 C.C. of 50 per cent magnesium sulphate is given. This injection prolongs the action of the ether. It is best to wait at least an hour after the instillation before making a vaginal or rectal examination.

6. If the morphine-magnesium sulphate is given towards the end of labor, with sedative effect, delivery usually takes place before there is any indication for the ether instillation.

7. If the morphine-magnesium sulphate *does* produce the sedative effect, the ether instillation is not given until the patient is again complaining severely of pains coming every three to five minutes and the cervix is at least three fingers dilated.

8. When the effect of the ether instillation has worn off, and the patient is complaining and the contractions are strong and frequent, a second or even a third instillation is given at two and one-half to three and one-half hour intervals, though not less than two and one-half hours. Only ten grains of quinine is used in the second and subsequent instillations, as after the first instillation all subsequent instillations are followed with an intramuscular injection of 2 C.C. of 50 per cent magnesium sulphate.

9. If after the first ether instillation with magnesium sulphate injection there is *no* sedative effect in one-half hour and birth is expected within two hours or so, Dr. Davis recommends giving a second ether instillation at once instead of waiting the usual two and one-half hours, using in this instillation:

Quinine (alkaloid) 5 grains.

Alcohol, 20 minims.

Ether, 1½ ounces.

Liq. Petrolatum, or olive oil q. s. ad., 2 oz. He also states that in case there is no sedative effect from the first ether instillation and magnesium sulphate injection, and the birth seems rather far off, then you can immediately give a second injection of morphine grain 1/6 with 2 C.C. magnesium sulphate (50 per cent) and the second ether instillation, if necessary, is given two and one-half hours after the first instillation.

10. At the time of delivery, if any anesthetic is required, ether inhalations are used sparingly, especially if the patient had two or more ether instillations.

11. Auditory disturbances, true diabetes and colitis are the only contra-indications for the use of this method.

CONCLUSIONS

1. It has been estimated that 90 per cent of the patients secured some relief from this method.

2. It can be used in a home as well as in a hospital and has proven to be safe method both for the mother and the child.

3. Labors are rarely prolonged by the use of this method.

4. The patients were quieter during labor, apparently underwent less strain, and were in a better general condition the following day than if this method was not used.

VERMINOUS ABSCESS — CASE REPORT

By DRS. C. F. FISHER *and* WM. P. BITTINGER
of Richwood, W. Va.

WE BELIEVE that this condition is of sufficient rarity to justify our reporting a case, and to add another case to the literature which in our efforts of investigation seems very meager.

DaCosta defines this type of abscess as "one which contains intestinal worms and communicates with the bowel."

Stedman's Dictionary defines it as one "due to inflammation caused by the presence of larvae or intestinal worms."

The abscess in this case occurred in the wall of the terminal ileum and was due to the Ascaris Lumbricoides. The migrations of this particular nematode are well known, but to migrate through or into the intestinal wall is relatively uncommon, and is stated by some authorities to never occur except in bowel previously diseased by some ulcerative process.

Holt states that "it has long been known that they would perforate an intestine, which was the seat of ulceration, but well authenticated cases have been reported in which they have perforated an intestine previously healthy, setting up a fatal peritonitis."

John C. Hemmeter states "that it is highly improbable and unproved that the round worms may cause an ulcerating inflammation or perforation of the intact intestinal wall, with consequent suppuration."

Heller denies that anatomical changes in the mucuous membrane may result from their presence.

F. Mosler cites cases where small erosions and enteritis were caused by the ascarides.

Huber in his work found that this worm secretes a strong chemically irritating toxin, and its effect on himself is interesting to read.

It is very possible that the toxin described by Huber caused the erosion of the bowel and enteritis in the cases of Mosler, and with these statements in mind it is not difficult to see that perforation of the bowel and consequent abscess, with peritonitis, might occur in otherwise perfectly sound bowel as well as in one the seat of some ulcerative process.

The case reported here shows the ascaris lumbricoides able to penetrate (and had the condition been allowed to go on), to perforate the intact intestinal wall, causing abscess and peritonitis.

H. C., age sixteen, white, school boy, was admitted to the McClung Hospital February 5th, 1926.

He stated that he had been in good health for the past few months with the exception of fleeting cramps in the region of the umbilicus, not associated with nausea or vomiting.

His past personal and family histories were unimportant.

In the afternoon of February 2nd he was seized with "cramps in the stomach" immediately after a meal, and thought at the time that they were due to sauer kraut, which had formed the bulk of his meal. The pain was sharp in character, non-radiating, and not associated with tenderness. This same type of pain was more or less constant from this time until three days later, five minutes being the greatest interval of time between "cramps." Slight nausea was constantly present but he did not vomit. His diet in this time consisted chiefly of milk and toast. In the evening of February 2nd he took one ounce of magnesium sulphate, and in the evening of the 4th one ounce of castor oil. Defectation was free and without pain or difficulty. He remained in bed all of this

time, and felt better lying on his right side with the lower limbs well drawn up. On the 5th he felt better and sat up and read, but in the afternoon he noticed his abdomen was becoming sensitive, and later painful to touch. Later in the afternoon the cramps returned with greater severity than ever, causing him to cry out with pain, with nausea and vomiting. The entire abdomen became painful to touch, and he was unable to lie on his back or to extend his limbs. His bowels moved several times with pain, associated with dysuria. He had never passed any worms. Up until this time he had not been seen by a physician, and was brought to the hospital at once with a diagnosis of peritonitis.

On admission—Temperature 101, pulse 120, respiration 26.

A severe grade of bronchitis was present, and albumen (2 plus) was found in the urine.

Total white cell count was 21,000.

Blood pressure, 107-70.

The abdomen was distended, dull in flanks, rigid, and very tender. No masses could be made out. The point of greatest tenderness seemed to be midway between the umbilicus and the pubes in the mid-line. Rectal examination revealed mid-line tenderness high up in the pelvis, and a suggestive mass.

A diagnosis was made of diffuse peritonitis, possibly of appendicular origin.

Operation was done, using chloroform anesthetic.

Operation

The abdomen was opened by a low right rectus incision, made close to the mid-line. In opening the peritoneum a large amount of brownish fluid with odor escaped. The cecum was delivered and the appendix inspected and found to be distended, soft, and the vessels markedly injected. The condition of the appendix did not explain the physical findings and the blood count. In view of the rectal tenderness the pelvis was explored, and a dense firm mass felt, and upon manipulation it was found to be easily delivered. This mass was found to be a part of the ileum.

The ileum at a point about eighteen inches from the cecum was found to be very firm and rigid for the distance of about nine inches, and of a dull purplish red color, exhibiting over its surface small ecchymotic spots. Midway in this area, situated at the amesenteric border was an area even more firm than the rest, size of an English walnut and raised above the surrounding tissue. This was closely examined and did not seem to fluctuate or to contain gas. Upon closer examination a small yellow point was seen near the edge of this elevated area. Upon manipulation the yellow point suddenly enlarged and was grasped with blunt forceps, and found to be the tail of a worm, which was withdrawn and found to be the Ascarides Lumbricoides. The worm seemed to be contained in a pocket, located in and formed by the wall of the bowel. No opening could be found between this pocket and the lumen of the bowel, and no gas escaped. The pocket contained about one dram of yellowish brown fluid. The area was cleansed with warm saline solution, and the rent in the intestinal wall closed with a continuous suture of fine silk. No other worms could be found in the bowel by palpation. Soft rubber tube drainage was placed in the pelvis and the abdomen closed in layers.

His recovery was uneventful, and he has passed no worms to date.

Considering the frequency of round worms, migrations of this type are exceedingly rare, and are denied by many if they ever occur through previously healthy bowel. In this case the bowel was otherwise healthy and the worm causing the abscess was the only one found.

BIBLIOGRAPHY

Modern Surgery, Dacosta—8th Ed., P. 153.

Stedman's Dictionary—7th Ed., P. 5.

Diseases Infancy Childhood—Holt, 7th Ed., P. 426.

Hemmeter—Dis. of Intest. Vol. ii., P. 573.

CANCER OF THE MOUTH

By JOSEPH COLT BLOODGOOD
Baltimore, Md.

ONE SELECTS this locality first, because here we have the evidence that correct information will largely, if not entirely prevent cancer. In fully ninety-seven per cent of cancers of the mouth of which I have definite records there are two distinct factors which clearly precede the area of irritation in which the cancer ultimately develops, and those two factors are tobacco in any form, including snuff, and ragged dirty teeth. Smokers who are very careful to keep their teeth clean and smooth and who stop smoking the moment they notice the white patch or experience the sensation of a sore mouth never get cancer. The relation between tobacco and ragged, dirty teeth, and cancer in civilized races is the same as between the irritation of the betel nut held in the mouth of savage races and their well-known cancer of the mouth. Experiments on animals have shown that irritation, especially with coal tar products will first produce a local growth like a wart and then a local growth like a cancer in the wart, and then, again, if the irritation still continues, the cancer cells migrate, produce other tumors and the animal dies. There may be other forms of irritation in the mouth which may produce cancer and from which we cannot be protected, but they are insignificant. Any one with correct information should be able to protect himself against cancer.

The results of giving this correct information to the public are strikingly present when we look over the figures of local conditions in the mouth which are cancer and those which are not cancer.

Up to 1900, in the Johns Hopkins Clinic fully ninety-seven per cent of the patients who consulted the clinic had waited and had local lesions which were cancer, three per cent only came under observation before the cancer had developed. Since 1920 forty per cent are cancer instead of ninety-seven per cent, and sixty per cent are innocent or benign instead of three per cent. In those days (up to 1900) when practically no one realized the causes of cancer of the mouth not only were ninety-seven per cent malignant, but of these more than fifty-five per cent were hopeless and only three per cent in the early stage of cancer. Since 1920 less than ten per cent are hopeless and more than fifty per cent are in the early stage of cancer. The chances of curing an operable late cancer are less than ten per cent, while in early cancer more than seventy per cent have remained well more than five years. The operation for late cancer is extensive and mutilating. In every instance the glands of the neck must be removed and in a large number of cases a piece of the lower jaw has to be sacrificed to completely remove the cancerous growth. In the early cases the operation is not much more than the extraction of three or four teeth under local (procaine) anesthesia. The little area is removed no matter where it may be situated with the new types of cautery which make the operation more satisfactory and no more painful. In the early stage of cancer of the lip the chances of a cure are one hundred per cent, and it takes less than one-half hour to remove the V-shaped piece.

What are the lesions of the mouth with which everyone should be familiar? In the first place there is leukoplakia—white patch; single, multiple, or diffuse all over the mouth. The moment one observes such a patch, stop tobacco in all forms, have your dentist clean and smooth your teeth, and have your doctor watch it. No other treatment is necessary. In my experience radium, X-ray, any form of caustic application are unnecessary and may be harmful. The sore mouth due to Vincent's Angina, so common in the crowded,

*Abstract of paper and demonstration before the Surgical Section of the American Medical Association, Dallas, Texas, April 19-23, 1926.

dirty trenches during the war and called "trench mouth" is very common today. I have never observed it, except in mouths in which there were teeth; people who have no teeth and wear plates do not suffer with trench mouths. It is often confused with leukoplakia, because the lesion may be single, multiple or diffuse, and there is a gray patch surrounded by a red zone. A smear on a cover glass properly stained and examined with the microscope will immediately settle the diagnosis. It is very important for the people and the dentists and doctors to be familiar with the sore mouth caused by the organisms of Vincent's Angina and the rapid way in which it can be recognized and cured by perborate of soda.

When the people receive this correct information and get the fear of the beginning of cancer, the proportion of innocent lesions that are not cancer but may precede cancer, and of innocent lesions that are not cancer, and never develop into cancer, increase in numbers as I have shown in my figures from three to sixty per cent. In former years those innocent lesions which had no relation to cancer got well of themselves and rarely did the dentist or the doctor of medicine see them. Of the lesions that preceded cancer, with few exceptions, most came under observation not only in the stage of cancer, but in the late or hopeless stage. For this reason since 1920 we have seen a great many examples of trench mouth and leukoplakia, and little fibromas which are hard nodules due to biting the tongue or cheek. Then we see the ulcer before it is cancer, due to the irritation or injury by a ragged tooth, or the pressure of a plate. Then there is the little area of irritation before it has become an ulcer or a wart due to ragged tooth or ill-fitting plate, and are becoming more and more common. The tongue is a fur-covered organ and when a patch of this fur is smooth like a bald spot on the scalp it looks like an ulcer, and the fear of cancer brings these so-called "geographical" tongues in large numbers under observation. On the base of the tongue, especially to the right and left there are normally little elevated papillae in which the nerve-end cells of taste are lodged. When these become a little larger and red and painful from any type of irritation, both men and women, whether they use tobacco or not, or whether their teeth are in good order or not, rush to their dentists or doctors to find out what it means. Now this is a tremendous change for the better. It not only leads to the definite prevention of cancer, but it brings these patients under observation, and in the examination, we may find infected tonsils, or nasal sinuses, root abscesses of the teeth, diabetes (sugar in the urine) scurvy due to improper diet, rickets in young children, the beginning of anemias. And, again, if cancer has really developed, it comes under observation when there is a large opportunity for a cure (fully eighty per cent) with the least mutilation.

ATHENIAN PROGRAM OF PHYSICAL EDUCATION

Games and gymnastics in Athens seem to have included most of the forms practiced in later life—running, the broad jump with and without weights in the hands, throwing the javelin and the discus for distance, and, above all, wrestling, besides the rudiments of boxing, and a form of the pancratium, a struggle which combined certain features of both boxing and wrestling with others of its own. Mention is also made of simple exercises to develop correct carriage and a graceful step in walking, and it is said that the art of swimming was early acquired, and that games, especially those in which the ball was used, were by no means forgotten. Dancing, at least in its more advanced forms, was not a regular subject of instruction at Athens, but was left to choral bands which received special training for their appearance before the public on festal occasions.—Leonard: History of Physical Education, p. 222.—*Journal A. M. A.*, May 15, 1926.

THE WEST VIRGINIA MEDICAL JOURNAL

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS

J. HOWARD ANDERSON, Marytown — WALTER E. VEST, Huntington — CHARLES W. WADDELL, Fairmont — HARRY M. HALL, Wheeling

THE JOURNAL issued on the first of each month. Entered as second-class matter, January 1, 1926. Acceptants for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Authorized July 24, 1919.

Subscription to Members	$2.00 Per Year
Subscription to Non-Members	$3.50 Per Year
Single Copies	35 Cents

OFFICERS

President:
J. R. BLOSS ..... Huntington
President-elect:
CHESTER R. OGDEN ..... Clarksburg
First Vice-President:
R. O. ROGERS ..... Bluefield
Second Vice-President:
H. C. SKAGGS ..... Montgomery
Third Vice-President:
D. A. MACGREGOR ..... Wheeling
Treasurer:
HUGH G. NICHOLSON ..... Charleston
Executive Secretary:
MR. STERRETT O. NEALE ..... Charleston
Delegate to A. M. A., 1926:
J. R. BLOSS ..... Huntington
C. R. OGDEN, *Alternate* ..... Clarksburg
Delegate to A. M. A., 1926-27:
H. P. LINSZ ..... Wheeling
R. A. ASHWORTH, *Alternate* ..... Moundsville

COUNCILORS

First District:
H. P. LINSZ, (1-year term) ..... Wheeling
C. G. MORGAN, (2-year term) ..... Moundsville
Second District:
C. H. MAXWELL, (1-year term) ..... Morgantown
C. H. HALL, (2-year term), ... Elkins
Third District:
JOHN FOLK, (1-year term) ..... Bridgeport
C. R. OGDEN, (2-year term) ..... Clarksburg
Fourth District:
J. E. RADER, (1-year term) ..... Huntington
W. E. VEST, (2-year term) ..... Huntington
Fifth District:
J. H. ANDERSON, (1-year term) ..... Marytown
H. G. STEELE, (2-year term) ..... Bluefield
Sixth District:
R. H. DUNN, (1-year term) ..... South Charleston
C. A. RAY, (2-year term) ..... Charleston

¶ All original articles for THE JOURNAL must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

¶ Our readers are requested to send marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

¶ It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

¶ Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

¶ Advertising forms will go to press not later than the tenth of each month. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

¶ Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, 303 Professional Building, Charleston, W. Va.

STANDING COMMITTEES

Medical Defense Committee

H. P. Linsz, Wheeling; C. R. Ogden, Clarksburg; C. G. Morgan, Moundsville.

Committee on Scientific Work

G. H. Barksdale, Charleston; O. D. Barker, Parkersburg; D. A. MacGregor, Wheeling, Scientific Secretary.

Public Policy and Legislative Committee

C. A. Ray, Charleston; G. A. MacQueen, Charleston; R. H. Walker, Charleston; James McClung, Richwood; J. R. Bloss, Huntington; D. A. MacGregor, Wheeling.

Committee on Hospitals

Robert J. Reed, Wheeling; B. H. Swint, Charleston; R. J. Wilkinson, Huntington.

Committee on Professional Relations

J. R. Shultz, Charleston, chairman, (3-year term); H. G. Nicholson, Charleston, (1-year term); H. R. Johnson, Fairmont, (2-year term); A. G. Rutherford, Welch, (4-year term); W. R. Goff, Parkersburg, (5-year term).

Surgical Section

E. Bennette Henson, Charleston, chairman; W. R. Goff, Parkersburg, secretary.

Eye, Ear, Nose and Throat Section

T. W. Moore, Huntington, chairman; R. A. Tomassene, Wheeling, secretary.

Woman's Auxiliary Officers

President, Mrs. A. G. Rutherford, Welch; *First Vice President*, Mrs. W. H. St. Clair, Bluefield; *Second Vice President*, Mrs. J. P. Lilly, Morgantown; *Secretary*, Mrs. C. M. Scott, Bluefield; *Treasurer*, Mrs. C. A. Ray, Charleston.

EDITORIAL

MORGANTOWN ATTENDANCE

There were registered and in attendance at our fifty-ninth annual meeting in Morgantown, physicians and surgeons from virtually every county in West Virginia. The program was one of the best and most interesting ever presented by the scientific committee. Men nationally prominent and many of our state's best essayists were heard on subjects uppermost in the minds and literature of the profession at this time.

The social functions were of the highest class and most enjoyable to the physicians and their wives. In fact, Morgantown did itself proud and everybody left feeling that the visit had been a real, instructive vacation. The visitors are under lasting obligations to the physicians and citizens of the University City for their loyal entertainment while the "stay-aways" will never know what a treat they missed.

The attendance was about half what it should have been. We know that all doctors can not leave a community at one time, but there are at least 1500 ethical, fair and square, upstanding practitioners in West Virginia who would not take advantage of a brother practitioner's absence while attending a medical meeting like our fifty-ninth session and take one of his patients or families.

We should arrange things with our neighbor to exchange time in looking after each other's work so that one or the other can attend these meetings. At the year's end, no doctor ever lost prestige, a patient or a dollar by taking two to four weeks for post-graduate work and medical meetings. His patients may be inconvenienced at the time, but they soon learn to appreciate the fact that they benefit in the end by the knowledge gained by their family doctor.

Start now to plan for next year. Read and digest the papers to appear in *The Journal* from time to time, whether you heard them read or not. Contribute something from your own storehouse of knowledge for the other fellow's benefit, swap time with your neighbor next year and let's make the state meeting at White Sulphur Springs memorable for its interest and members in attendance. —CAR.

———o———

HOSPITALS OF W. VA.

Hospitals are organized and operated primarily for the care of the sick and injured. Many of the hospitals of West Virginia are owned and operated by private individuals or organizations of physicians and are known and listed as private hospitals. Perhaps half a dozen are owned and operated by church organizations with more or less of endowments from individuals. Three are owned and operated by the state—the so-called miners' hospitals at Welch, McKendree and Fairmont.

All the rest represent so much capital invested by physicians with but little prospect for adequate returns or dividends on the investment other than the satisfaction of having a place to take patients needing hospitalization. Many deserving charity cases are cared for without thought of remuneration in dollars and cents.

But it is this spirit of altruism on the part of physicians and hospitals that is taken advantage of and imposed upon by numerous persons who are able to pay and should pay for the services given. Drunks picked up on the street, those wounded in drunken brawls, are brought to hospitals by police officers or strangers who leave them there without making any arrangement for defraying the expense incurred. Persons injured in automobile or traffic mishaps are rushed to the nearest hospital, but no one assumes the responsibility.

Transients are admitted, given the best of service and a 'promise to pay" is all they leave.

The attitude and rulings of the state compensation department in reference to payment of hospital fees for injured employees are rather unreasonable and unfair and pri-

vate-owned hospitals lose money on virtually every such accident case hospitalized. The state maintains its three hospitals, known as miners' hospitals, out of the general fund collected on all taxable property and at the same time collects fees from the compensation department for the hospital bills incurred in treating injured employees. Taking the money out of one pocket and putting it in another, so to speak! If the poor devil gets appendicitis some private hospital must take care of him because he has paid, as an individual, about a dollar a month into a hospital fund in order that he and his family may be cared for in case of sickness or injury suffered when otherwise engaged than in his usual occupation.

The state hospitals are a great benefit to the sections in which they are located, they are self-sustaining and we have no criticism of their work and maintenance; but we do object to the discrimination practiced by the workmen's compensation department as between state-owned and private-owned hospitals.

If a person "jumps" a hotel bill, or a board bill in a private boarding house he can be prosecuted under our criminal statutes; but if he sees cause to "dead beat" a hospital, it is but to laugh!

There is sufficient work in West Virginia to keep our hospitals full to capacity and on a reasonable, paying basis if the managements will conduct their business along some uniform, business basis. We think there is a hospital association in West Virginia and it is high time for this body to begin to function. If legislation is necessary now is the time to formulate plans. No harm and much good may come out of a meeting of all hospital organizations for the purpose of cooperation. —CAR.

———o———

ON ELECTIONS

When most elections occur in Medical Societies there are always to be found quite a number of men who speak rather disparagingly of the way they were carried on. Such phrases as "cut and dried", "put up job", "a regular slate", "clique" and the like are likely to be broadcast freely. Having observed elections of all kinds for 30 years and having been guilty of using some of the above phrases ourselves it is just as well to record an observation or two.

The best practitioners, surgeons and specialists are not necessarily good executives. They are quite likely to be very poor administrators at times. Engrossed in work, requiring things to be reasonably accurate and logical and vagaries of politics with their varying human elements are not going to be very satisfactory to them. Most men who are in the political arena entered firmly convinced they would stick to truth, hold to the right, and let nothing sway them. They found truth pragmatic. There were two sides to all questions. Most everything in America is accomplished by compromise.

Cliques are just as frequently unselfish as they are selfish. A clique often breaks up a stronghold of monopoly. Very little could be done or ever would be done if some clique did not work it out. It is when they have an eye on only their own advancement that they become a nuisance and are ultimately killed, usually by another clique.

There are quite a number of men engaged in Medical Politics who do not want any office. Not that they want to sit in the background like Colonel House and write memoirs later, either. But they do want to see things move along and the medical profession to be so well organized that nothing can phase it. Everyone save the veriest tyro can easily see solidarity must be just ahead of us. The upheaval in England shows us we must aim to present a solid front sometime.

It is usually the man who does not attend much, or who will almost never be found entering into the kind of affairs that take up time and require considerable effort that we find most loudly disclaiming against the usual order. Some day he will join some caucus or clique and will there learn the truth. Haphazard nominations and snapshot elections have ruined many a well organized body. No one can deny that a great deal of injustice and perhaps not a little unfairness can creep into the elections of a medical society. They do everywhere else so it is not to be expected they will prove exceptions in

matters of the medical profession. We think they do less than they do anywhere else. We may be prejudiced. We think not. Many times a newcomer or a man of obscure attainments will occupy some office in place of some man who essentially deserves it. He may not (to be candid) be associated intimately with prevailing cliques. In the end the whole business may be found as pre-eminently fitting. For as we said in the beginning executive positions in a medical society are becoming less and less matters of honor and glory and more and more straight matters of executive ability, organization and business. The best surgeon in a place may be its worst executive. The leading internist may be decidedly poor in guiding a well organized parliamentary body. For the most part we believe nine times out of ten the appropriate man is chosen. —H. M. H.

———o———

REV. SPROUL LEAVES

The Reverend John W. Sproul has left Wheeling. On his final night he had seven thousand in attendance. He was carried over from the Island, across the bridge, and to his hotel on their shoulders. It out Sundayed Billy Sunday by a great many hundreds. A minister talking from the pulpit said Rev. Sproul talked to 350,000. On the street cars were signs about the last night and among other statements were the words: "SIGNS—WONDERS—MIRACLES."

There are those who say they have no cataracts where they had them before—they walk now where they did not formerly—they hear what was as nothing. Crutches piled up. Parades of the happy. Masses of the uplifted and the purer in heart!

Well, what shall we say? It is a mark of blasphemy almost to criticise. It shows an evil spirit to dare to question. So then what shall we say—we will say this, that there were some there (say one or two out of the 350,000) that helped to swell the tremendous totals always in evidence where the "Laborer is worthy of his hire" that never seemed to think it necessary to be so generous with their doctor.

What bearing has Rev. Sproul's trip to Wheeling had on the medical profession? None. They watched him with a slight interest when he first came. They rarely ever discussed him and he ceased to be a topic one week after his advent. He is brought forward here because as time goes on we shall make an effort to tabulate the progress of one or two of his more famous "cures."

He came to Wheeling under different colors than most evangelists. He came to cure the sick and to make the lame walk. To that extent then being curative we shall note the effects and try to be catholic in our aims.

To us it is the ministers of Wheeling who ought to feel to a certain extent humiliated. It is true the Ministerial Association, if we understand correctly, did not give its *okeh* to this project. We doctors of medicine sometimes get provoked at the way some one from the outside steps in and appropriates the whole scheme of curing unto themselves but then it is rather slight and concerns us but very little. But here is an evangelist who steps in and brings in 12,000 souls that the ministers could not reach.

And why can't the ministers use the power of prayer and Jesus Christ to cure the sick? Why must it be a traveler with a big frame building called a Glory Barn and the methods of a hippodrome to produce the effect? Ask the follower of the Reverend Sproul and he will quickly retort "That was Christ's method. He used it in the Sermon in the Mount." Makes one think maybe all the churches ought to go together and build a barn.

So, fellow practitioners, with our many adversaries we are not alone. Side by side with us are the ministers. And next will come the lawyers, sooner or later.

—H. M. H.

———o———

EX-PRESIDENTS HONORED

Elsewhere will be found the announcement that Washington and Jefferson College of Washington, Pa., will confer the honorary degree of Doctor of Science upon two of our ex-presidents, Doctors F. J. Reed and Frank LeMoyne Hupp, both of Wheeling, on commencement day, June 16. The staff of *The Journal* therefore extends congratulations to

them on behalf of the entire membership at this time.

Both are Fellows of the American College of Surgeons, members of the Board of Governors of the College of Surgeons and members of the attending staff of the Ohio Valley General hospital, etc. They have been active in the state association for more than a score of years. Dr. Hupp was president in 1913, Dr. Reed in 1919.

———o———

AGAIN, PROTEST!

The Journal, February 6, called attention to bills pending in Congress to authorize operations under the Sheppard-Towner Act for two years beyond the limit originally fixed for the termination of such activities. The House of Delegates had previously condemned the original act. *The Journal*, therefore, appealed to constituent societies and other agencies to support the action of the House against the enactment of these bills to extend its life. Such a bill has, however, passed the House of Representatives. In the Senate, the Committee on Education and Labor reported favorably the bill already enacted by the House, but recommended that authority for prolonging operations under the act be limited to one year. This abbreviation of the proposed prolongation of the life of the act was based on the opinion of the committee that the functions taken over by the federal government under the Sheppard-Towner Act were state functions and should be allowed to revert to the states. The evidence offered by the proponents of the pending legislation to justify its enactment, so far as such evidence is available, is of a most general and uncertain character, and much of it comes from interested witnesses. Certainly it is not such as to convince any person accustomed to weigh evidence concerning such matters that the Sheppard-Towner act has reduced or ever will reduce maternal or infant mortality beyond the reduction that the states themselves might effect. Nor is the evidence such as will convince a careful student of government that the federal government can continue to buy from the states, through subsidies, the right to supervise and control state activities that the federal government under the constitution cannot directly control, without endangering our entire system of government. The proponents of the pending bills frankly admit that the two years' extension they have sought is not sufficient to accomplish the purpose of the act, and that additional extensions for indefinite periods will be required. They are not likely, therefore, to omit any effort to have the Senate reject the recommendation of the committee that the life of the act be prolonged for one year only and enact the bill as passed by the House, providing two years' extension. Those who believe that the Sheppard-Towner act is essentially pernicious will do well, therefore, to continue their efforts to defeat any legislation looking toward the extension of the act for any period whatever. Action toward that end may accomplish its purpose, and even if it does not, it will tend to support the recommendation of the committee for a one year extension only. Protests, to be effective, should be sent immediately, by telegram or special delivery, as the bill may come up for action at any time. —*Journal, A. M. A.*, May 8, 1926.

———o———

A BOOST FOR LYDIA!

Ordinarily the columns of a medical publication are not the places for levity, but there is a story making the rounds that should bring a smile to our membership.

A woman visiting in a certain city over the week-end decided to attend church Sunday morning. Nearby was a beautiful edifice, she entered and found herself in the midst of a Christian Science "testimonial" meeting. Worshipers were relating the wonderful "cures" that the Mary Baker Eddy faith had brought to them.

Finally, a man arose, remarked upon the presence of a stranger and said he was sure the members would be pleased to hear from her and of her experiences.

"Really, I know nothing of Mrs. Eddy's wonderful power over error," she said, "but I am quite certain that Mrs. Eddy never did more, if as much, for any of you as Lydia E. Pinkham has done for me."

The meeting adjourned.

REPORTS FROM COMPONENT SOCIETIES

G.-H.-H.-M.

At a regular meeting of the Grant-Hampshire-Hardy-Mineral Counties Medical Society, held in Romney, Hampshire county, the following resolution was adopted:

"Whereas Dr. Charles S. Hoffman, through the acts of an all-wise Providence, was called from this life on February 11, 1926, be it

"Resolved, that in the death of Dr. Hoffman this society has lost one of its most active and influential members whose contributions, interesting personality and wise counsel have added greatly to the success of the society; and it is the sense of the members of this society that each has lost a valued friend and co-worker whose kindly advice and assistance will be greatly missed. Be it further

"Resolved, that, we, as a society, extend our sympathy to those of his family who remain to mourn their loss.

W. M. BABB,
A. A. SCHERR,
M. H. MAXWELL."

Barbour-Randolph-Tucker

The Barbour-Randolph-Tucker Medical Society met at Elkins in Y. M. C. A. building, May 3, at 8 p. m.

The following were present: Doctors A. S. Bosworth, W. W. Golden, Ben I. Golden, A. M. Fredlock, T. M. Wilson, C. A. Groomes, E. M. Hamilton, A. P. Butt, O. L. Perry, C. H. Hall and J. C. Irons. Visitors were Doctors T. Jud McBee and R. W. Fisher of Morgantown, J. U. Baker, D. D. S., F. S. Johnston, druggist, and Dr. Lonkianoff of Davis Memorial hospital and Mr. Albert Will of Elkins.

Dr. Groomes presided. The minutes of previous meeting were read and approved. Several communications were read. One was from Clarksburg from a committee of the Harrison County Medical society, asking the cooperation of the members of the profession in securing the enactment of a law taxing tobacco ten per cent, the proceeds to be used in providing more efficient and ample means of caring for tubercular cases, as the present means are too limited to reach the desired end.

The following committee was appointed to investigate and report at the next meeting of the society: Doctors A. S. Bosworth, O. L. Perry and B. I. Golden.

The application for membership of Dr. John H. Bailey of Philippi was read, having been recommended by Dr. A. P. Butt, Dr. J. W. Myers and Dr. B. I. Golden. Under suspension of the rule, Dr. Bailey was elected a member of the society.

Dr. L. W. Talbott having passed the 65th year, and having been a paid member for many years, was elected an honorary member of the society.

Dr. T. Jud McBee of Morgantown was then introduced, and read a very interesting paper illustrated in part by lantern slides, his topic being, "The Present Status of the Treatment of Prostatism." Dr. McBee called special attention to the frequency of prostatic troubles in men, especially those past 40 years of age, and to the serious conditions resulting therefrom when not properly treated. He most especially stressed the need of proper preparatory treatment before an operation, and recommends that the treatment is much more satisfactory if cared for by a specialist rather than by a general surgeon. The paper was highly recommended and was discussed by Doctors Fisher, Butt, Groomes and W. W. Golden.

Dr. McBee is no stranger to the people of Elkins, as he was once resident physician at Davis Memorial hospital, and later located and practiced in the city for a short time. He is now specializing in urinary diseases, etc.

Dr. E. M. Hamilton of Belington presented two cases of cardiac lesions in girls nine and twelve. One was congenital—the other lesion following scarletina and was not observed until some time after the eruptive fever.

This case impresses the need of constant vigilance in cases of rheumatism, scarlet fever, etc., lest the complications be more serious than the disease.

The meeting then adjourned to meet next time in Tucker county if the way be clear.

NOTES

Dr. and Mrs. B. I. Golden were made happy on May 1 by the arrival of a daughter whom they have named Sarah. The last report was that "all were doing well."

J. C. IRONS, *Secretary.*

Central West Virginia

An interesting and instructive meeting of the Central West Virginia Medical society was conducted in Sutton May 6, at 8 p. m. Those present included Doctors W. H. McCauley, vice president, who presided in the absence of Dr. C. F. Fisher; L. O. Hill, Davidian, Gruber, Echols, Rusmisell, O'Rourke, Morrison and Brown.

Dr. O'Rourke read a paper prepared by Dr. Fisher on abscess from worms which was listened to with much interest and commented upon by most of those present.

Dr. Morrison offered a resolution favoring the chlorinating of the water supply of Sutton which was adopted. Local physicians entertained the visitors at lunch in the Elk hotel after which there was a smoker. The next meeting will be held in Webster Springs about July 3 to 8 and a 100 per cent attendance is anticipated.

—H. S. BROWN, *Secretary.*

Greenbrier Valley

Movement has been started in this district comprising Greenbrier, Monroe and Pocahontas counties to enroll all eligible practitioners in the society and thus make it one of the strongest in the West Virginia State Medical association. There are about 60 prospective members and 20 now are on the roster. Letters have been sent to all non-affiliated practitioners which read, in part:

"The Greenbrier Valley Medical society embraces Greenbrier, Monroe and Pocahontas counties: three of the best counties in the state. All regular physicians in these counties are eligible and are invited to become members. Nearly 60 practicing physicians are located in these counties, and we hope to see a larger percent enrolled as active members than heretofore, attending our meetings and contributing their part to make our meetings useful and of practical help. If you are not a member, join. If you are a member, get in touch with your neighbor and invite him to join us in building up a better society. We are sending this letter to all physicians in the above mentioned counties that we have the address of. Those on the inactive list we want to bring in as honorary members, and have them meet with us and give us the benefit of their long experience, and not feel that they are out of the fight.

"The dues may seem to some of us as rather high, but we are getting in return one of the best state medical journals published. Membership in your county society carries with it membership in the state association and makes you eligible to membership in the American Medical association and the Southern Medical association: two societies that any physician should be proud to be a member of. Our state society has for members the medical defense fund, and stands as a united profession behind its members. Our full-time State Secretary is ready to help us in any of our problems, and can give us a lower rate of auto insurance than we can get elsewhere. Membership in your local and state society will be of help if you want reciprocity with another state. Insurance companies select their medical examiners, preferably, from men who are members of their medical societies. Consider these matters, join our society and help us to carry on."

—C. F. MAHOOD, *Secretary.*

Marshall County

The last two meetings of the Marshall County Medical society have been held on April 13 and May 4. The attendance was up to expectations. We are enveloped in a great tangle concerning the work of the county health unit in Marshall county, and had with us at the last meeting, the members of the County Court, the new county health man, Dr. Burman and Dr. David Littlejohn of

Charleston, who after listening to the talks of a dozen or more members, said he thought our trouble was in the "viewpoint." He illustrated with the story of the young lady arriving home from a party with her escort. In the hall she bade him good-night, but he urged that it was not late for he could see the clock from where he stood. She replied, however, that she could see the head of the stairs and her dad was there.

NOTES

Dr. Peck accused Dr. Morgan of coming to the meeting wearing his state meeting suit, *i. e.*, his good clothes.

President Striebich looks and acts better (away from home) without his appendix.

Dr. Page Barlow is shaving and brushing his clothes, trying to act in the habit of being President of the B. and O. surgeons.

Nobody talks about Dr. Ashworth only the children and mothers whom he "doctors," and they only say good things.

One should hear Dr. C. S. Fortney make a noise if he doesn't get his notice of a meeting on time. He sure must make Dr. Mary believe it is an awful trip to attend the meetings.

Dr. Wilson's son is still improving.

Nobody will tell why Riggs of Cameron and Bone of Moundsville, Theiss and Martin of New Martinsville have not attended any of the meetings. Bonar has been down and told the new health man how to run his job.

We have a delayed program of papers not to take more than five minutes to read on treatments, the doctor to choose the disease and treatment next meeting to be held the second Tuesday in June.

—W. S. HARTWIG, *Secretary.*

Mercer County

The Mercer County Medical society met in regular session at 8 o'clock April 29 at Bluefield and was called to order by President Vermillion.

The minutes of the previous meeting were read and approved.

Under clinical cases, Dr. C. J. Reynolds reported a case of an injury on the male urethra with an opening into the perineum. Dr. Scott reported three cases of cardiospasm accompanied by X-ray pictures, which demonstrated the condition very clearly.

First on the program was Dr. H. S. Ogilvie of Charleston, who gave us an excellent paper on "Simple Diagnostic and Therapeutic Principles in Neurology," which is to be printed in *The Journal.* A discussion on the paper was opened by Dr. Rogers, who said he enjoyed the paper very much and the one thing which made it interesting to us was that Dr. Ogilvie stuck to elementary principles on diagnosis which made it instructive to the general practitioner and a more thorough understanding of our cases will be easier for us in the future. He said, "We are glad Dr. Ogilvie has cast his lot with us in West Virginia. We should appreciate it and stick by him."

Dr. A. H. Hoge thanked Dr. Ogilvie for his paper saying that he (Dr. Ogilvie) almost persuaded us that it was easy for us to make a diagnosis in these cases. He described the metabolic tests in hyperthyroidism and brought out a very interesting case.

Dr. Sam Holroyd said that no one enjoyed the aper any more than he did and that "we do not give these patients enough attention." He ridiculed severely the political appointments to the heads of our institutions throughout the state. He says they put doctors there (in the nervous and mental hospitals) who don't know anything about nervous diseases. "Such men as Dr. Ogilvie are very scarce in West Virginia. These appointments should be in the hands of the State Medical association and we should have appointed to the heads of these institutions such men as the one we have with us tonight."

Dr. David Littlejohn said he wanted to emphasize what Dr. Ogilvie said in his paper in regard to syphilis. He said "No syphilitic patient should be turned loose on the public until we get a negative spinal fluid test in addition to several Wassermanns. Later on these patients will develop neurosyphilis. No patient can be cured without the administration of mercury." In closing, Dr. Ogilvie thanked the doctors for their remarks. He agreed with practically all that had been said along the line of diagnosis and treatment of these cases. He emphasized the fact that

the reading in five or six titrations of the spinal fluids should be made.

The next paper was by Dr. David Littlejohn of Charleston, who is still a member of this society, on "Cooperative Health Program." He said he was very glad to be back with the members of the Mercer County Medical society and that he expected he would continue to be a member of this society for some time yet to come if we didn't push him out or we didn't object. He made us a very extensive talk on the above subject and brought out some very good and interesting points, and emphasized the fact that it was very important that we register our cases of communicable diseases as carefully as we are compelled to register our deaths, saying that we report one case of measles for instance when possibly four or five others in the family contract the disease later which are not reported. He said our death rate in West Virginia for typhoid fever in 1924 was 23½ per cent. This is entirely too high and gives us a bad reputation throughout the United States. In the same year we had a death rate from whooping cough of 10 per cent where in Pennsylvania they only had two and one-half per cent. He said, "We, the health officers, protect the health of the individuals in our community. A few physicians try to put something across that is a little bit shady. If he lies once he may lie again. I don't know if I can just trust such a fellow. Why should some doctors be criticized while they are trying to do their duty in reporting all their cases of communicable diseases while other doctors don't report cases at all. At the same time all deaths are reported."

Under discussion Dr. Reynolds said that Dr. Littlejohn, having been a health officer here in Bluefield and now assistant to the Commissioner of Health at Charleston, is in position to appreciate these things, *i. e.* all cases of communicable diseases should be reported. He said "Some of the doctors in Bluefield report one case of whooping cough in a family while they may have several other cases later due to the fact that the doctor is not called in to see but the first case"

The question was brought up, what is the length of period of quarantine in this state for the different communicable diseases. Dr. Littlejohn said we should tell the patient that our duty is to make a diagnosis and treat them, but we did not make the laws to keep them confined in quarantine. Dr. Slusher said the nurses oftentimes antagonized the patient in the manner in which they talked to them about being quarantined, etc. He said he thought it was their duty to help educate the people. Dr. Clements brought out several good points in his remarks in how difficult it is for him to handle these different communicable diseases and get them quarantined on the coal company works where he is the physician. Dr. J. R. Vermillion, as part time health officer of Mercer county, said he would be only too glad to send cards on which these communicable diseases could be reported to any doctor throughout the county where there isn't a health unit.

Dr. Lepper, the new city health officer of Bluefield, was extended the privilege of the floor. He said he didn't have anything to say at this time but hoped he would have an opportunity to bring before this society his outline of a health program sometime in the near future.

Dr. W. H. St. Clair was appointed, by a vote of the society, as chairman of the cancer program to be put on at one of our future meetings. Doctors Sam Holroyd, Hoge and Slusher were appointed by the president as the Welfare Committee.

There were 24 members and five visitors present.

We adjourned at 10:45 p. m. followed by a Dutch luncheon.

H. G. STEELE, *Secretary.*

RESOLUTION

April 29, 1926.

Whereas, God in his infinite wisdom has seen cause to remove from our midst Mrs. Addie Gertrude Steele, the wife of a member of this Society, Dr. Harry G. Steele;

Resolved: That the Mercer County Medical Society hereby expresses its appreciation of an esteemed woman, a devoted wife and mother, and a kind and loyal neighbor; and

furthermore it extends to her bereaved family its profound sympathy:

Resolved: That this tribute of respect and expression of sympathy be made a part of the minutes of the Mercer County Medical Society, that a copy of these resolutions be sent to the bereaved family, and that other copies be mailed to the *Bluefield Daily Telegraph* and the *West Virginia Medical Journal* for publication.

A. H. HOGE,
O. S. HARE,
R. O. ROGERS,
Committee.

———o———

Ohio County

The Ohio County Medical society, at its meeting May 7, elected officers and heard an interesting paper by Dr. H. A. Miller of Pittsburgh, on the subject: "End Results in Obstetrics." The election resulted as follows:

President, C. H. Clovis.

Vice President, J. W. Gilmore.

Secretary, J. G. Thoner.

Treasurer, Howard Phillips.

Board of Censors, J. E. Marschner, H. W. Bond and R. J. Reed.

Delegates to the State Convention, H. M. Hall, E. L. Armbrecht, D. A. MacGregor and the Secretary.

The alternates chosen for the State meet were M. B. Williams, W. T. Morris, H. T. Phillips and C. H. Keesor.

Dr. Miller believes if all cases of obstetrics were watched closely, most would be found to have developed some little complication not strictly normal. He suggested if you were satisfied yours were always very nearly normal to make a post partum examination. He stated with emphasis that in his opinion a cervix was fully dilated when the head was doing it and not when it could be dilated with fingers. He believes in cauterizing erosions. He does it with a little steel rod like a probe or bougie. The probe can be heated with a Bunsen burner or alcohol lamp. He gets good results and is a firm believer in it. Doctor E. M. Phillips and J. P. Cole led the discussion.

At the meeting April 23, Dr. W. D. Wise of Baltimore, spoke on the subject: "A Plea for Earlier Operation in Surgical Conditions of the Biliary Tract." The paper was discussed by Dr. W. S. Fulton and others.

NOTES

Dr. O. D. McCoy of this city is being sued for $35,000 and as usual the matter goes back over several years and is concerned with symptoms and diagnoses now long since, what might be styled, obsolete. As it has been told to us there is every evidence of a man trying to do his best with the symptoms at hand to make the patient well. A long interval occurs. Then an attempt to collect. Result: A law suit.

Two ideas spring up. Will doctors ever learn to devise some method to have their bills better respected? Take the two cases reported in the May *Journal* where not enough was left after paying for too expensive funerals to pay the doctor. The second idea is, would the patient do as this litigant is doing without aid from the outside?

Dr. Garner Scullard is the new pathologist at the Ohio Valley General hospital. He is a graduate of Toronto, 1916. He came here from St. Francis hospital of Pittsburgh.

Dr. William Sheppe, former pathologist at the Ohio Valley General, is in Virginia at present taking up some special work. He is on the program at Morgantown. Will later be associated with the Wheeling Clinic.

Dr. F. E. Roberts, formerly associated with the Wheeling Clinic, is now practicing in Moundsville, W. Va.

Dr. Trethway has been indisposed and is out of the city recuperating.

Our celebrated citizen, Dr. J. Schwin, is in Atlantic City, his favorite place for recovering from the rigors of a Wheeling winter season.

Dr. Joe Caldwell has just recovered from an eight weeks' seige with a carbuncle on his neck. In conversation with him we gathered he felt that before going into new fields of discovery the medical profession might work out the question of carbuncle a little better. He had advice from over a hundred sources. Tried every known method from excision to X-ray and serums. But although he really overlooked several remedies in use in the rural districts his carbuncle with its sequela lasted eight weeks. —H. M. H.

Upshur County

Following a reorganization meeting of the Upshur County Medical society, steps immediately were taken to enroll all of the eligible practitioners in the county in the society.

The meeting was held in Buckhannon May 5. Those present were: Doctors O. O. Bennett, G. O. Brown, W. H. Gum, L. W. Page, J. A. Rusmisel, Everett Walker and Mr. Sterrett O. Neale, executive secretary of the West Virginia Medical association.

After a talk by Mr. Neale, election of officers was held and upon motion of Dr. G. O. Brown, Dr. Everett Walker of Adrian was re-elected President. Dr. L. W. Page was elected vice-president and Dr. L. W. Deeds, secretary. Censors named were Doctors Bennett, Brown and Gum. It was decided that the secretary would confer with the Harrison County Medical society some time during the year to see if the Upshur County Medical society could not affiliate with the Harrison county society.

It was also decided that the next meeting would be held June 21, 1926.

L. W. DEEDS, *Secretary.*

STATE AND GENERAL NEWS NOTES

SHALL PHARMACISTS SERVE PHYSICIANS?

By SAMUEL S. DWORKIN

Chairman Committee on Biologicals, National Association of Retail Druggists and American Pharmaceutical Association, New York City.

Biological products are becoming a greater factor in the modern materia medica every day.

Millions of patients are being treated with these products daily and judging from the astounding results achieved by this form of medication it is only in its infancy. Millions of dollars are being invested in research work in biological, chemical and pharmaceutical laboratories that represent an enormous capital investment.

Modern medicine in its scientific pursuits not only strives by these means to cure the scourge of many diseases that afflict mankind but even greater attention is being given to the subject of preventive medicine as is shown by the extensive use of such biologicals as diphtheria toxin anti-toxin mixture for immunization against diphtheria or authorified scarlet fever streptoccocus toxin for active immunization against scarlet fever.

However, with all these advances in the science of medicine little attention seems to have been given to the adequate and proper distribution of these important products.

It stands to reason that manufacturers of biologicals, chemicals and pharmaceuticals cannot maintain in addition to their research and manufacturing laboratories, distributing depots in all parts of the country where physicians can be promptly and efficiently served with their requirements day and night.

The question therefore arises, who shall be the logical distributor for biological products and other medicaments and what should be required of him?

A recent survey made throughout the United States reveals the fact that vast quantities of these products are being distributed in a more or less haphazard manner by supply houses who engage in this business largely in a commercial way only without any attempt to render a real professional service to the medical fraternity.

The proper storage under refrigeration, the prompt delivery of all orders, the selection and carrying stock of only products of the highest standards, the checking up of stocks of outdated potency, are only a few of the important duties that devolve upon the shoulders of the distributor.

Summing up all the factors that enter into the distribution of biological products, ampules for medication and other medicaments, who is better qualified and who should be looked to as the logical distributor of these products other than the professional pharmacist? The physician of today is one of the principal guardians of the public health and the professional pharmacist is the other.

It is most logical that there should be a closer bond of cooperation established between the medical and pharmaceutical professions if the well-being and health of the public at large are not to suffer.

Pharmacists are prepared and ready to serve physicians as professional men and it is our belief that the medical fraternity will be served better, more efficiently and with a greater professional understanding if they will encourage pharmacists by looking to them as the logical distributors for biologicals, arsphenamines, insulin and medicaments of all kinds.

The question of what the pharmacist should charge for his services as a distributor is one which also deserves discussion. As a rule the professional pharmacist will only ask a fair percentage of profit to cover his overhead charges, such as rent, heat, light, clerk hire, maintenance of refrigeration, etc., on his sales to physicians for products to be used in their offices or for personal use.

However, too often when patients ask what the cost will be to them of certain medicaments prescribed for them, physicians unintentionally make the error of quoting the price at which they themselves buy these same products for their own use. We know this is not the general practice but feel that in justice to the professional pharmacist and the service he renders, this erroneous practice should be brought to the attention of the medical fraternity.

We believe every physician will grant that the professional pharmacist is entitled to a legitimate margin of profit in excess of his overhead charges on sales he makes to the consuming public whether such represent physicians' prescriptions or other products.

As a matter of professional pride, from the standpoint of service and sound economics we offer this suggestion and also in the hope that we may hear constructive suggestions and criticisms from our friends in the medical fraternity. A broad discussion of this problem in all its phases will be welcomed either by direct correspondence or through the columns of this publication with the permission of its editor.

Our mottoes are "Live and Help to Live" and "He Who Serves Most Serves Best."

DEATHS

Dr. H. Lon Carter, 60 years old, of Madison, Boone county, died suddenly Saturday, May 15, at Sharples where he had been conducting a hospital for some months. Death was caused by heart disease. Funeral services were conducted May 17 at his residence and hundreds of friends, including a representation from the Kanawha Medical society, attended.

In reporting Dr. Carter's death, *The Charleston Gazette* said:

"Dr. Carter, who was about 60 years of age, ranked high among the physicians of the state. He was loved by other doctors and his knowledge and skill were recognized by fellow physicians, as well as by the thousands he had attended in illness during the many years he practiced his profession. He was an outstanding figure in Democratic politics. No gathering of Democrats was complete with Dr. Carter absent and no campaign successful unless his advice on many matters was followed. He served several terms in the house of delegates and two years ago he was a candidate for state senator, losing only by a few votes when Logan county threw its support to a 'native son' candidate.

"The deceased is survived by his widow and two sons, Carl Carter and Lyle Carter, of Madison."

NURSES ATTAIN HIGH STANDARDS IN TESTS

One hundred and four student nurses in West Virginia took the examinations conducted May 5 in Wheeling, Bluefield, Huntington and Martinsburg and there was not a single failure, according to a communication received from Dr. Frank LeMoyne Hupp of Wheeling, president of the West Virginia Board of Examiners for Registered Nurses.

"This speaks eloquently for the high standards of teaching in the accredited training schools of our commonwealth," writes Dr. Hupp. "In obedience to the new state law, every applicant for R. N., presented credentials indicating that she had a year of high school work or its equivalent."

The personnel of the state board includes Mrs. N. McIntosh Noel, R. N., of Princeton; Miss Vesta Reid, R. N., of Huntington; Miss Blanche M. Young of Martinsburg; Mrs. Andrew Wilson, R. N., of Wheeling; Harriet B. Jones, M. D., of Glendale, and Frank LeMoyne Hupp, M. D., of Wheeling.

The examination questions submitted to the nurses are as follows:

Anatomy and Physiology.

1. Name the organs of respiration?
   What is the purpose of respiration?
   Of what is the air composed?
2. Name the organs of circulation?
   When and by whom was the circulation discovered?
   Trace a red blood cell from the right auricle to the arch of the aorta?
3. Name the organs within the abdominal cavity?
   What organ is found within the cranial cavity?
   What fluids within the alimentary tract are alkaline; what fluids are acid?

Surgery.

1. (a) Define shock; discuss the nursing treatment of shock?
   (b) Discuss conditions requiring urgent treatment following an abdominal operation?
   (c) Signs and symptoms of a too tightly applied plaster bandage?
2. (a) What are the important principles of aseptic surgery?
   (b) Name two disasters following tonsilectomy?
   (c) Why would it be dangerous for the nurse to leave a patient recovering from ether anaesthesia?
3. A child aged 5 is brought to your ward following operation for septic peritonitis due to a ruptured appendix; criticize and make additions to the following orders:
   (a) Fowler position.
   (b) 10% Glucose by rectum, oz. viii, q. 2 h.
   (c) Force fluids.
   (d) House diet.
   (e) Morphine 1/6 q. 2 h.

Medical Nursing.

1. (a) Briefly discuss typhoid fever?
   (b) Mention signs and symptoms of two serious complications?
   (c) When is it usual to consider convalescence established?
2. (a) Distinguish between Haemoptysis, Haemotemesis, Epistaxis. Give source and possible causes of each and nursing measures for relief?
   (b) Cause, prevention and treatment of bed sores?
3. (a) What are the most common sources of infection in tuberculosis?
   (b) Can the treatment and nursing be successfully carried out at home? Who discovered tubercular bacillus?
4. Define Locomotor Ataxia, Epilepsy, Lumbar Puncture. Give three symptoms of brain tumor?

Obstetrics and Gynecology.

1. (a) Symptoms of approaching labor; how would you prepare your patient?
   (b) What symptoms should be reported to the doctor during the first week following delivery?
2. What drugs are used?
   (a) To prevent blindness in the new born?
   (b) To arrest post partum bleeding?
   (c) To increase the force and frequency of labor pains?
3. Define ectopic gestation?
   (a) Give symptoms before and after rupture?
   (b) What would you do?
4. (a) Define Eclampsia; Hysterectomy; Cystoscopy; Anuria; Rectocele; Mastitis; Embolus?
   (b) What is meant by a malignant tumor? Describe a case you have seen?

Materia Medica and Toxicology.

1. Compare ether, chloroform and nitrous oxide as to their advantages, or disadvantages?
   When and by whom was each discovered?
2. (a) Define a specific drug? Mention three, and name the disease for which they are indicated?
   (b) Define: Cathartic, anodyne, hypnotic, diaphoretic, emmenagogue, emetic, anthelmintic, expectorant?

(c) Name four habit producing drugs?

3. (a) Give common and adult dose of
   Oleum Tiglii?
   Magnesium Sulphate?
   Oleum Ricini?
   (b) Name the ingredients of:
   Bland's pills?
   Compound Cathartic pills?
   Dover's Powder?
   Fowler's Solution?

4. What chemical poison is found in common household lye?
   Why is it dangerous?
   Why should every can be marked with skull and crossbones?
   Give antidote for lye?
   Name three deadly poisons used for disinfection in every hospital?

Pediatrics.

1. (a) Discuss scarlet fever, period of incubation, period of quarantine, name two complications, modern method of immunization?
   (b) What are the chief causes of infant mortality?
   (c) What special points are to be observed in the care of milk to be used in infant feeding?

2. (a) State important points in nursing a child with pneumonia? What type of pneumonia is most frequently seen in children?
   (b) What are the qualifications for a good pediatric nurse?
   (c) Define St. Vitus' dance?

3. Give nursing care of a child who has had Intubation, Tracheotomy, Cleft Palate?

4. Define cretin, hydrocephalus, dentition, marasmus, rachitis, eugenics?

Diatetics.

1. Discuss the diet for a nursing mother with reference to:
   (a) General rules?
   (b) The menu?
   (c) The tray?

2. (a) What foods should be eliminated in diabetes, in nephritis, in anaemia?
   (b) What is the function of the pancreas; where is it located?

3. (a) What digestive fluid is secreted by the stomach; what enzyme does it contain?
   (b) Outline diet for a case of gastric ulcer?
   (c) Define Peptomized Milk, Certified Milk, Pasteurized Milk?
   (d) How would you modify cow's milk for an infant one week old; give reasons?
   (e) What does a safe milk supply involve?

Bacteriology and Hygiene.

1. (a) What role is played by the mosquito in the dissemination of disease?
   (b) Name two diseases caused by the bite of the mosquito?
   (c) Why is the common house fly a dangerous pest?

2. (a) Define antibody, immunity, disinfectant, sterilization, streptococci, bacteriology?
   (b) What do you consider the most important factors in maintaining your own health throughout your training?

3. Give concerning the following: The microorganism; the source of infection; the mode of transmission; the portal of entry; any vaccine or serum used for the prevention or treatment of:
   (a) Diphtheria?
   (b) Typhoid?
   (c) Tuberculosis?
   (d) Syphilis?

Ethics and History of Nursing.

1. (a) Name three points in the West Virginia law concerning the examination and registration of nurses?
   (b) What impresses you as being one of the most important questions before the nurse today?
   (c) Why should a nurse maintain discretion in her speech?

2. (a) Who was the founder of modern nursing?
   (b) Tell what you know of the Red Cross Nursing Service in the United States?
   (c) What do you understand by the National League of Nursing Education?

Practical

1. Define: (a) Sims position?
   (b) Trendelenberg position?
   (c) Knee chest position?

(d) Lithotomy position?
(e) Fowlers position?

2. What is meant by gavage? lavage? Select or name requisites for these procedures?
3. Describe and illustrate three ways of examining urine?
4. What have you gained in your practical course of cookery?
5. (a) Demonstrate improvised croup tent using articles found in the home?
   (b) Demonstrate taking a smear from a suspected diptheritic throat?
6. Prepare tray and show how you would cleanse mouth of a delirious or unconscious patient? What is the danger of an unclean mouth?
7. Place the following labeled bottles in order of their strength:
   (a) Normal salt solution?
   (b) 4% Glucose solution?
   (c) 5% Boric Acid solution?
   (d) 1-100 Bichloride of Mercury solution?
   (e) 1-5000 Permanganate of Potash?
   (f) 20% Carbolic Acid?
   (g) 50% Formaldehyde solution?
8. If you have Strychnia gr. 1/30 tablet and were ordered to give gr. 1/60 what would you do?
9. Apply emergency tourniquet to the brachial artery?
   How would you arrest hemorrhage after amputation 5 inches above the knee?
10. Demonstrate the treatment of over distended breasts in an obstetric case who has lost her babe?

TRI-STATE MEETING DRAWS BIG AUDIENCE

If sponsors of the new Tri-State Medical society were happy over the success of their first quarterly meeting in January, they were highly elated over the success of the second meeting held May 6 in Huntington. The first meeting had a registration of approximately 300—the second had more than 600 in attendance.

There were four head-liners on the program. Dr. George W. Crile of Cleveland, opened with an address on "Certain Problems in the Treatment of Diseases of the Thyroid Gland with Special Reference to Hyperthyroidism." The discussion was opened by Dr. Andre Crotti of Columbus.

The next paper was "The Pathology and Immunity of Syphilis in Relation to Serum Diagnosis and Treatment," which was read by Dr. John A. Kolmer of Philadelphia. Dr. Stewart Roberts of Atlanta, Ga., then gave an interesting paper on "The Heart Muscle."

A business session was held in connection with the dinner at 7 p. m., in Hotel Prichard, which was followed by Dr. Hugh Cabot's discussion of "The Present Status of the Treatment of Prostatic Obstruction." Dr. Cabot, of Ann Arbor, Mich., illustrated his talk with lantern slides. His paper was discussed by Dr. Gordon McKim of Cincinnati.

The next meeting of the society will be held in Huntington in September at which officers will be elected for the coming year. A committee to draft the constitution and by-laws includes Dr. Kincaid of Catlettsburg, Ky., Dr. I. P. Seiler of Ohio, and Dr. Oscar B. Biern of Huntington.

COMPENSATION RULING IS BEING WATCHED

One of the interesting cases investigated recently on behalf of one of the state association's members was that relating to a dormant claim for fees arising out of setting an employee's fractured arm. The bill was submitted the first of March but May had arrived without any check from the workmen's compensation department.

The check-up on the case disclosed that it was one of those puzzlers that often confuse the members of the medical profession and even raise an element of doubt in the minds of some heads of departments in the compensation department. This particular case had been referred to an inspector and it was his report that had delayed payment of the physician's fee.

From the facts available, the employee of a contractor started to work one morning last Fall. He went to his yard, cranked his trusty Ford—or started to. The engine back-fired, a broken arm resulted and the employee, judging that he was covered by the compen-

sation act, had the report submitted in the usual manner.

However, West Virginia courts have ruled that an employee is covered by the compensation fund only after he has arrived at the place of his employment. Some states have held that an employee should be covered, it is said, from the time they leave their domiciles until they reach home again at the close of the day, but the West Virginia courts have held differently.

So, much interest has been manifested as to how the department will treat the physician's bill for $30 for attending the employee. It is generally believed that the fee will be denied and that the only recourse the physician has is to collect direct from the employee —if possible!

TWO MEMBERS ARE HONORED BY W. & J.

Announcement has been made of an action of the board of trustees of Washington and Jefferson College at Washington, Pa., conferring the degree of Doctor of Science upon Doctors Frank LeMoyne Hupp and Robert J. Reed.

Formal ceremony attendant on this elevation will not be done until the graduation ceremonies incident to commencement exercises which will be about June 16.

We congratulate these two gentlemen and we believe all the medical men in the state will join us as we are very sure it is an honor we really all share in, since these two men have for years worked among us and we have in their cases always had what we do not always have, the rare good sense to appreciate their respective merits. We have rewarded them from time to time with the best we had to offer and now we are glad to see that other forces outside our ranks have seen fit to do so, too.

For the younger men, just starting out, these two men have a good deal in the way of performance to emulate. Quite different in every way in their methods they have both never faltered in action and word and example in giving that great word DIGNITY to their calling. To see them honored is but a natural sequence.

CHESTER R. OGDEN IS CHOSEN PRESIDENT

(From the Morgantown New Dominion)

The West Virginia State Medical Association closed its fifty-ninth convention in Morgantown after the election of officers and a program of scientific addresses. The next convention will be held at White Sulphur Springs.

Dr. Chester R. Ogden of Clarksburg, formerly chairman of this district of the American College of Surgeons, was elected president to succeed Dr. James R. Bloss of Huntington. Other officers elected were: Dr. C. B. Wylie, Morgantown, first vice president; Dr. Claude Frazier, Powelton, second vice president; Dr. E. L. Armbrecht, Wheeling, third vice president; Dr. Maxfield Barber, Charleston, treasurer, and Sterrett O. Neale, Charleston, executive secretary.

The newly-elected council named Dr. C. A. Ray of Charleston as its chairman. The council also selected Dr. H. R. Johnson of Fairmont as chairman of the medical defense committee, the other members of which are Dr. C. G. Morgan of Moundsville and Dr. I. D. Cole of Clarksburg.

An event of unusual interest was the announcement made by Dr. H. P. Linsz of Wheeling that he desired to retire as a member of the council after serving consecutively for 20 years. In making this announcement Dr. Linsz said that he desired to place in nomination for treasurer the son of the doctor who had nominated him as a member of the council 20 years ago. He named Dr. Maxfield Barber of Charleston. An ovation was given Dr. Linsz, and Dr. V. T. Churchman of Charleston arose to remark that in the 33 state conventions he has attended he had seen no spontaneous tribute equal to that paid Dr. Linsz.

The following committee appointments were made:

Chairman of committee on public policy and legislation—Dr. R. A. Ireland of Charleston.

Member of professional relations committee (five year term)—Dr. H. G. Nicholson, Charleston.

Members of scientific committee—Dr. H.

G. Steele, Bluefield; Dr. C. H. Keesor, Wheeling and Dr. E. P. Smith, Fairmont.

Workman's compensation committee—Dr. V. T. Churchman, Dr. W. A. McMillan and Dr. R. H. Walker, all of Charleston.

Members of committee on public health and preventive medicine—Dr. David Littlejohn, Charleston; Dr. John Thames, Kingwood, and Dr. W. H. McLain, Wheeling.

Delegates to the American Medical Association—Dr. James R. Bloss, Huntington. Alternate—Dr. A. A. Shawkey, Charleston.

The new council of the state association is composed of the following members:

First district—Dr. H. R. Johnson, Fairmont and Dr. C. G. Morgan, Moundsville.

Second district—Dr. C. H. Maxwell, Morgantown and Dr. C. H. Hall, Elkins.

Third district—Dr. John Folk, Bridgeport and Dr. I. D. Cole, Clarksburg.

Fourth district—Dr. J. E. Rader and Dr. W. E. Vest, both of Huntington.

Fifth district—J. Howard Anderson, Marytown and Dr. H. G. Steele, Bluefield.

Sixth district—Dr. R. H. Dunn, South Charleston and Dr. C. A. Ray, Charleston.

SEDIMENTATION TEST— AN AID IN OBSTETRICS

The following is an abstract of a paper delivered before the section of Obstetrics and Gynecology of the New York Academy of Medicine on February 23 by Dr. Herman L. Frosch and it is reprinted from the academy's bulletin of April, 1926:

The phenomenon of the varying rates of sedimentation of red blood cell in different diseases has been observed as far back as 1767. But it is only within the last five years that the medical profession has awakened to the diagnostic and prognostic aid that it may give. A simple method is described of doing this test.

A sedimentation rate of more than two hours is considered normal. A sedimentation rate of one hour or less indicates an acute infectious condition, medical, surgical or gynecological exists. An increasing sedimentation time means that the patient is improving; a diminishing sedimentation time is an indication that the patient is getting worse. This test is particularly important in tuberculosis.

A surgical patient having a sedimentation time of less than one-half requires an immediate operation. Very frequently the temperature and blood count are normal yet the sedimentation time indicates an acute infection, which on operation shows that the test was correct in its diagnosis of an acute condition.

The test is of no help in the diagnosis of pregnancy, but is of aid in the differential diagnosis from fibromyoma uteri, the sedimentation time being less in the former. But should the latter undergo degeneration, then it cannot be used to differentiate the two as the sedimentation time is about the same. Non-bleeding extra uterine pregnancies have the same sedimentation time as normal pregnancies. It is only when an ectopic ruptures, that the sedimentation time becomes rapid. Neither is it of aid in diagnosing eclamptic or pre-eclamptic conditions. During the postpartum period, the sedimentation time is less than one hour, so that if a toxemia or septicemia develops the best is of no aid.

The test is of most use to the gynecologist in adnexal disease both as to the time of operation and differential diagnosis. If there is a question of differential diagnosis between ectopic pregnancy, ovarian cyst or any other tumor and pyosalpinx, then a sedimentation time of less than one-half hour rules out the former conditions. In a salpingitis, if we believe that no case should be operated on during the acute stage, then any sedimentation time in such a patient of less than one hour should mean watchful waiting. The more rapid the sedimentation time the more acute the infection. Especially should this test be used in cases of adnexal diseases having a normal temperature and normal blood count.

In malignancy the sedimentation time is rapid. Removal of the tumor brings the sedimentation time to normal. A recurrence of rapid sedimentation time indicates that the malignancy has recurred provided all other sources of acute inflammation have been eliminated.

Experiments have proven that the increased rate of sedimentation in the condi-

tions mentioned is dependent on a relative increased globulin and fibrogen content of the serum.

Cases are cited to prove the statements made concerning the test.

CONCLUSIONS

1. Sedimentation time of more than two hours is considered normal.

2. An increasing sedimentation time means that your patient is improving. A diminishing sedimentation time means that your patient is getting worse.

3. The prognosis is poor in any case having a persistent sedimentation time of less than one-half hour.

4. Any surgical case having a sedimentation of less than one-half hour requires an immediate operation.

5. This test is of no aid in the diagnosis of pregnancy.

6. In gynecological pelvic conditions it is an aid both in the differential diagnosis and also as to the time for operation.

SOURCE OF EMBARRASSMENT

The *Nation's Health,* May, 1926, in an editorial on the subject of popularizing medical knowledge mentions the amount of health information that has been supplied to the general public during the last few years, and comments on the fact that this has not been confined to special health publications, but is general in the daily press. Certainly it is true that the daily newspapers have been doing almost their share in the great work of preventing disease and preserving health. Many of them now have their health columns, and in these health matters of general interest are usually considered sanely and wisely. It is a matter of considerable satisfaction to those enlisted in the service of the public health to know that they have on their side the most powerful agents known in shaping public opinion and in furthering public education.

One statement in this editorial, however, is a source of embarrassment. "All reputable newspapers," according to the text, "have purged their columns of nostrum advertising . . . " The statement is not qualified; it may be taken as conclusive. One of two deductions is allowable. Either *The Nation's Health* has made a misstatement, due, probably, to ignorance of local conditions, or certain highly considered Boston newspapers are not reputable. Since no one would accuse such publications as *The Boston Herald* of being disreputable, the editorial writer of *The Nation's Health* must be in error, for the *Herald* continues to accept and print the most outrageous type of nostrum advertisements.

We are, of course, far too sophisticated in this day and generation to believe that anyone is his brothers' keeper. A certain well known son of Adam dispelled this quixotic ideal several generations ago. We have been taught that the public loves to be fooled and the public is decidedly getting what it wants. Curiously enough, however, governments, associations and individuals are trying to prevent the public from getting what it wants if it is not good for it. The finer questions of morals are always difficult to decide but it seems to us at least that it is unethical, unsportsmanlike and dishonest to exploit the ignorance of the individual to his detriment. We wish that we could make the business managements of such papers as the *Herald* view these matters as we do, but apparently they are not yet ready to constitute themselves their brothers' keepers.—*Boston Medical and Surgical Journal.*

INVITATION EXTENDED ....

The National Association for the Study of Epilepsy will conduct its twenty-fifth annual meeting in the Waldorf-Astoria, New York city, June 7th and 8th. The meeting precedes the sessions of the American Psychiatric association.

BLADDER DISTURBANCES IN BRAIN, SPINAL TUMORS

The following is an abstract of a paper on "Bladder Disturbances in Brain and Spinal Cord Tumors," which was written by Dr. Charles A. Elsberg and published in the *Bulletin* of the New York Academy of Medicine in April, 1926:

The subject is of importance to the genito-urinary specialist because bladder disturbances may occur as early symptoms of new growths of the brain and spinal cord. Patients have been treated for considerable periods for supposed vesical disease and cystitis, who had compression of the spinal cord from tumors or enlarged blood vessels or in whom the symptoms were due to a neuritis of the roots of the cauda equina. Patients with bladder symptoms apparently due to an enlarged prostate were seen in whom the bladder symptoms were due to the spinal cord lesion rather than to the enlarged prostate.

In patients with new growths of the brain and spinal cord (excepting those which involve the sacral cord and the roots of the cauda equina), the bladder disturbance is either an increased irritability or a retention of urine with perhaps secondary incontinence.

Of 165 patients with tumors of the brain, 69, or 41 per cent, had mental disturbances, and 60, or 36 per cent, had some disturbance in emptying of the bladder; 23 per cent had occasional or continued incontinence. The patients with frontal lobe tumors, in whom mental disturbances were frequent, often had urinary disturbances; thus three-quarters of the patients with frontal lobe tumors had some disturbance of the bladder function, and almost one-half had occasional or continued incontinence; only one-tenth of the patients with posterior fossa tumors, one-seventh of those with parietal lobe tumors, and one-fifth of those with temporal lobe tumors had incontinence. On account of the greater frequency of mental disturbances in tumors of the left frontal lobe, incontinence occurred more often in left frontal tumors than when the growth was on the right side.

If the patients in stupor or coma were excluded, urinary disturbance occurred about so often in cortical as in subcortical growths.

In tumors of the spinal cord, bladder disturbances occurred much more frequently in extramedullary, extradural and conus and cauda tumors than in intramedullary growths. There is no particular section of the cord that is especially concerned with control of the vesical sphincter, but the lower down in the spinal cord the tumor, the greater the frequency of bladder disturbances.

Bladder disturbances usually appear late in spinal cord tumors excepting in extradural malignant disease.

In patients with intramedullary tumors, interference with bladder function, although more rare, appears earlier in the course of the disease.

Regarding bladder disturbances in spinal cord tumors, the following may be said: If the spinal symptoms have lasted less than six months, difficulty in emptying the bladder is most frequent; if they have lasted from six to twelve months, difficulty in urination or incontinence are frequent; and when the symptoms and signs of spinal compression have lasted several years or more, incontinence either due to overflow or true paralysis of the sphincter muscles is most frequently observed. It seems to be the rule that there always is a marked disturbance of sensation and motor power before distinct bladder disturbances occur.

The West Virginia Medical Journal

Directed and Edited by the Committee on Publication

[The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible]

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS:

WALTER E. VEST, Huntington — HARRY M. HALL, Wheeling — J. HOWARD ANDERSON, Marytown — C. W. WADDELL, Fairmont

MR. S. O. NEALE, *Secretary-Business Manager*, Charleston

Entered as Second Class Matter, January 1, 1926, at the Postoffice at Charleston, West Virginia

Volume XXII JULY : 1926 *Number 7*

ORATION ON MEDICINE *

By J. H. J. UPHAM, M. D.
Columbus, Ohio

ON LOOKING OVER the splendid program for the meeting of your State Association, I have been greatly impressed by the wide range of subjects chosen for discussion and their very excellent and varied character. Your program committee is certainly worthy of the highest commendation for its efforts, just as you are to be congratulated for the opportunity presented to you. I feel that it augurs well for the medical conditions in your state, just as the same happy state of affairs is reflected in similar meetings all over the country. Never has the light of our science burned so brightly, never has the prestige of our profession risen to such heights, never have the practitioners of the healing art so justified their calling as at the present time, and yet never has our profession been so assailed, calumniated and traduced as it has been in the last few years. Articles have been published, interviews broadcast and pamphlets written attacking medical doctrines and medical activities in the endeavor to instill distrust in the public mind and undermine the confidence of the people in modern medicine.

A very cursory analysis of these outbursts shows the character of their inspiration and the reasons for their utterance, so that it is unnecessary to notice them, much less answer them. It is unfortunately true that in these days of literary prolixity, thinking is nearly a lost art; people read but do not consider or analyze and are prone to accept the printed word at its face value, hence some honest people have doubtless been deceived by the activities of those actuated by self interest, whose methods have been exposed by our organized profession and in retaliation have carried on a systematic propa-

* Delivered before a public meeting of the West Virginia State Medical Association, by invitation, at its fifty-ninth annual meeting at Morgantown, May 25, 1926.

ganda of abuse and mis-information.

The unholy alliance, made up of the various cults based upon pseudo scientific theories, which deceive not only the ignorant, but many otherwise intelligent people, the proprietary medicine group, charlatans and quacks of all sorts who, when the reorganized medical profession demanded that all who sought to treat the sick should know enough to recognize disease, that the medicines supplied should be what they claimed to be and that advertising of medical products and medical methods should be free from extravagant and impossible claims, raised the cry of "Medical Trust" and the catch-word of "Medical Freedom" to becloud the minds of the people. It is exasperating to read and hear the absurd things that are solemnly asserted in this campaign of propaganda, and it is irritating and aggravating to see some of our good people led astray to worship at the altars of these false gods, and yet I wonder if we do not take it too seriously at times, and whether a counter barrage of abuse and retaliation is our best defense.

We have a moral obligation to demand that all who treat the sick should have certain fundamental educational qualifications, no matter what the school of practice, and as physicians it is our duty to uphold the torch of true medical science, but I believe that we would serve that science best, and humanity as well, if we practiced the tenets of our profession and the principles of our art so conscientiously, honestly and whole-heartedly that there would be few so blind but could see the true from the false.

We must be patient with the public remembering that from the very dawn of medicine, with its long association with the priesthood, there has ever been a suggestion of the supernatural, very difficult to eradicate, and a factor to be reckoned with. We must confess that this habit of mind was rather encouraged by some of our predecessors and that we are now paying the penalty, in that these modern cults are catering to the very superstitious mental state that we induced. Diagnoses cloaked in bewildering terminology, consultations held in ritualistic secrecy, garb and manner calculatingly solemn and impressive; this side of the practice of medicine of not so many decades ago, is not so gratifying.

Theories of pathology and treatment were evolved as fanciful conceptions and empiricism, rather than rationally based on anatomic or proven data. When we consider that modern pathology really only dates back some seventy-five years, to Virchow's cellular pathology, and it is less than half a century to the revolutionary work of Lister and Pasteur, which established the infectious character of so many diseases, we must marvel ourselves at the progress that has been made.

In that brief space of time many of the problems of disease and disease processes, which mystified our forefathers; many epidemic diseases that ravaged the world have disappeared; typhus fever, which was formerly a deadly plague, and which had the unenviable record of being especially fatal to the doctors and nurses in attendance, is now almost unknown; sweating sickness is merely of historic interest; cholera is hardly more than a memory; yellow fever, which formerly visited this country periodically with frightful loss of life, such as that which visited Philadelphia about 125 years ago, and which Benjamin Rush satisfactorily, to himself and his colleagues at least, explained as arising from the effluvia from a rotting cargo of coffee on a Brazilian ship tied up to a wharf in the Delaware river, this great pest has also lost its power. Typhoid fever, diphtheria, scarlet-fever are yielding their sovereignty, and even diabetes, one of the oldest diseases, described two thousand years ago, is at last being treated on a rational basis. So one might continue on the marvels of physiologic discoveries made, pathologic observations tabulated and therapeutic reforms inaugurated, but they are already familiar to you and my main object in mentioning them is to suggest that the amount of progress has been so great, the rate of advancement so rapid, that the public has not been able to keep pace with it and is in fact, lagging far behind in the twilight zone of semi-ignorance in medical matters. It is my earnest belief that the modern efforts employed in teaching the laity even the elementary facts along health and disease preven-

tion lines through the public health talks and our own health journal, *Hygeia*, will be very fruitful of good in the next few years. It seems self-evident that the more people know of health facts and the manner of disease production, the greater will be their respect for and appreciation of scientific medicine.

What part are we as individuals playing in the present course of events? It seems to me that the medical profession today is like a great modern army with its many departments or branches of service, corresponding to our numerous specialties, all cooperating with the great rank and file of practitioners, who after all bear the heat and burden of the day in the great fight against disease.

We have our scouts, our research workers; these are the pioneers who seek out new paths through the unknown wilderness and discover new facts and bring them to our attention. We cannot all be workers of this sort; it takes a special type of mind which can strike out from the beaten paths and break a new trail into unknown territory. Our part is to keep well informed of advances made and to test out new theories of practice and treatment in the greatest of all laboratories, general practice, and prove the good and discard the false to the end that our patient may have the benefits of the latest developments of medical science.

Another great branch of our army is made up of those engaged in sanitary science and preventive medicine. We may well be proud of the progress that has been accomplished through their work, as through it the plagues of former years have lost their power to terrify and destroy, and dread epidemics no longer devastate our communities. Thousands of lives are saved annually, and millions of dollars have been saved to this country in lessening quarantine necessities in the southern states against yellow fever alone. It made possible the building of the Panama Canal, and undoubtedly was a factor in helping to win the World War, as may be judged by comparing the extraordinarily increased efficiency of the American Expeditionary Forces from freedom from infectious diseases compared with the disastrous record of the armies of the Spanish-American War of only twenty-seven years ago.

We cannot all engage in the general activities of this department but we have today an opportunity to cooperate in a movement of preventive medicine that compares favorably with any of the great victories over epidemic diseases if it is not one of the greatest campaigns for the preventione of disease that has been inaugurated in many years. I refer to the periodic examination of the apparently healthy. This subject has already been discussed this afternoon, and so much has been written on it in the last few years, that I feel the risk of wearying you, but the fact is so apparent that the periodic examination is not being taken up with the enthusiasm it deserves, that I run the risk, remembering that it is the iteration and reiteration of facts that finally impresses them firmly in our minds.

The reason of the failure to date to take up more rapidly the periodic examination, is not hard to find. Practitioners of medicine have so long been busied with the care of the sick and relieving the suffering that they have developed a habit of mind which resents anything that trespasses upon this first duty. We have all felt a sense of irritation at being called out for trivial ailments and this same feeling, more or less unconsciously, extends to giving up the time necessary for making physical examinations of the apparently healthy. The essential thing is for the general practitioner to be convinced of the great value of these examinations to the patient in the early discovery or in the prevention of disease, the great aid the data obtained may be in the treatment of their patients when they are ill, and the great value to the physician himself in increasing his diagnostic skill, and the periodic health examination will become a recognized and important part of routine practice.

In regard to the first, we are all familiar with the insidious onset of many diseases, and how many of them may be recognized often by a careful examination before the patient himself realizes his illness; such are diabetes, tuberculosis, cancer of the uterus, breast, stomach and elsewhere, hypertension, with or without vascular sclerosis, nephritis, the anemias, etc., which may be detected at perhaps the only favorable time for their

treatment. The insurance companies are quickly recognizing this and more and more of them each year are notifying their policy-holders and urging them to go to their examiners yearly for examination free of cost. Why do they do this? Is it pure philanthropy? Far from it, rather a purely business proposition; one of the pioneer companies in this work claims that such examinations have added an average of two years of life to their policy-holders, which means an average of two more annual premiums paid at a cost of only five or ten dollars for the examination, which is very good business for the company. This is merely a matter of a few more dollars saved to already plethoric companies, how much more, how immeasurably greater are the returns to the individuals themselves and to the families of those whose span of life has been thus lengthened!

Let me put the case in another way. Almost everyone owns an automobile nowadays, and all recognize the necessity for an occasional inspection or overhauling by the mechanician. Many arrange for periodic service by which every month or so their cars are carefully inspected for signs of wear and tear, the detection of minor impairments and the like. Why? Simply because it has proven to save trouble and expense in the long run, gives better returns on their investment and prolongs the life of their cars. Most of you have many patients that earn by their efforts annual incomes of $2,500 or $5,000; do you realize that this means an invested working capital, on a very conservative basis, in their bodies of $50,000 or $100,000? This does not mean money in the bank, or invested in bonds or otherwise, that will bring certain returns rain or shine, health or sickness, by no means! On the contrary, it is only potential money, or money invested in a machine that is capable, perhaps, of earning more if properly directed, of earning les, if improperly treated, and like all machines it will gradually deteriorate and eventually wear out entirely. When, therefore, such individuals come to us and present their 50,000 or 100,000 dollar bodies for inspection, in order that they may learn if they are running at their full capacity, whether perhaps, they may be made more efficient, whether there are any signs of beginning wear and tear which may be corrected by judicious advice; how they compare with the conditions found a year ago, whether or not the load should be lightened to avoid a breakdown, when, I say they come to us with such requests, dare we longer refuse them or turn them off? The duty is plain, the opportunity is present, and we practitioners must arise to the occasion and prove to the world that the medical profession is a unit in seeking to prevent disease as well as to cure it.

The periodic examination is of great value also in the treatment of disease. There is no one of us who, at times, has not been confronted by conditions when it would have been of great value to know how long the pathologic state has been in existence. We may meet any time cases of nephritis, pathologic hearts, malignancy or some other like diseases beginning insidiously, with a very misleading clinical history, and we can only estimate approximately as to the duration of the morbid state. How helpful it would be to have the report of examinations made six months or a year previously! How much more accurately could we judge the stage and progress of the disease and how much better would we be prepared to treat it!

I have seen cases of pneumonia when I would have given much to know the blood pressure before the illness, so as to recognize in a falling systolic pressure an early sign of a failing heart, often occurring before noticeable clinical symptoms. Often an obstetrician may assure himself by the rising blood pressure in pregnancy of a dangerous impending toxemia before other clinical symptoms present themselves, and a record of the patient's pressure taken in health would be of great assistance.

In diabetes, who can say how long the disease has been present unless there are records of former examinations? This disease is so insidious, that if a patient comes to us complaining of loss of weight, polyuria, polyphagia, etc., the chances are that it has been in existence for months, perhaps a year or more before attracting the patient's attention to his condition.

Who can judge the duration of hyperten-

sion, and often it is the duration rather than the height that causes the greater damage to the organs of the body. Examples might be multiplied to show how great, even life-saving information, might be gained if we had at our command in times of illness the records of recent examinations of our patients made when they were in good health.

There is a third reason why we should be eager to encourage the periodic examinations and that is the great benefits in the knowledge and improved skill to be derived from making them.

As an unfortunate corollary to the great developments in mechanical aids and laboratory methods in diagnosis there has been a growing tendency to neglect the older and simpler methods. I would not be understood as implying anything derogatory to the many wonderful and often highly technical methods of precision which have been developed; many of them are at times indispensable and are always valuable, but I do believe their popularization or exploitation has led to a definite neglect of the old and tried methods of physical diagnosis by which so much of importance may be elicited, and by which a good working diagnosis may be made in really the great majority of cases. There are conditions that tax all the methods we know, but usually our laboratories furnish us with additional or confirmatory information to that obtained from a careful history, the use of a trained eye, skilled palpation and percussion and an educated ear together with the ordinary simple clinical tests. Too often the lack of an X-ray machine or laboratories is made a reason for failure to make a thorough physical examination; it is not a reason, but rather an excuse and is a thing to be deplored.

Another excuse sometimes offered, not even as valid as the preceding, is the lack of time to make a thorough examination. Every one has as much time as anyone else; when one's daily program seems overcrowded, one consciously or unconsciously selects to do those things which he either prefers to do or which seem to him of greater importance. The offering of such an excuse therefore is the admission by such a practitioner that he has relegated the careful examination of his patients to the category of minor importance and is content to take chances in diagnosis.

A third and still poorer excuse is sometimes heard, that a practitioner cannot afford to take the time necessary for a thorough examination, as the patient would object to paying the family practitioner an adequate fee, while more or less cheerfully paying many times the amount to a specialist. The average American hates to be overcharged but pays cheerfully if he feels that he is getting the worth of his money and on that very basis, I earnestly believe that the average patient would willingly pay a fee in proportion, considering the difference in overhead, which would well repay the practitioner financially, in addition to the increase in his information about the patient's complaint and the added increase in respect from his patient and a boost for his own superiority complex.

Whatever the excuse, the results are bad for our patients and for our profession; I have known too many patients who have been put to the expense and inconvenience of travelling a considerable distance when a very satisfactory diagnosis could have been made by a very ordinary complete physical examination. This is bad for the practitioner, for it reflects on his ability, but even worse it impairs his first-hand information of his patient's condition and the habit of making personal deductions from physical findings.

Too often have I been called to see patients of whom the statement is made that while they had symptoms suggesting heart disease, it was probably not organic because there was no murmur, when a very cursory inspection of the bared chest would show the position of the apex beat to be downward and outward and percussion would indicate the left border of the heart an inch or more to the left, enough already to prove the presence of an enlarged heart and therefore organic change.

Apparently the physical examination in these cases was limited to the use of the stethescope, which in point of fact, should be used last in a routine examination, and the presence or absence of a murmur should be the last thing listened for. The actual heart rate, so as to inform us of a pulse def-

icit, the rythm and tone of the heart muscle are points of greater import as to the condition of cardiac efficiency than the presence or absence of a murmur. In fact the latter merely tells us of the presence or absence of valvular disease and therefore as to whether the primary cause of the heart hypertrophy is within the heart or outside of it. As far as the patient is concerned, and the relief of his symptoms, the efficiency of the heart muscle is the main thing that counts.

The stress placed on heart murmurs is a relic of older days when heart disease practically meant valvular disease, and the causal relation of focal infection, vascular and renal disease to cardiac morbidity was not generally known. We frequently see statements regarding the alarming increase of heart disease in recent years, that it has displaced tuberculosis and cancer and now ranks as chief among the causes of death. The facts are, however, that the older types of heart disease, *i. e.*, valvular disease, are becoming less and less frequent and with the multiplication of tonsillectomies in childhood and consequent decrease in acute rheumatism, this form of heart disease should become relatively rare. The great increase in heart deaths is found in those past middle life and is of the relatively recently recognized type secondary to focal infections, vascular and renal disease, thyroid toxicity or other causes of persistent cardiac overwork.

These are the types also that can be readily recognized in the early stages of hypertrophy, long before the classic symptoms of decompensation, by the simplest procedures of physical diagnosis.

I have seen cases also of patients referred as suffering from gastric hyperacidity, or even gastric ulcer, with 3 and 4 per cent of urinary sugar undiscovered.

I well remember a man long treated for gastric pains, deluged with alkalies, dieted from one extreme to the other, wearing a harness to support a diagnosed ptosis, until wearying of doctors, he consulted and suffered much from osteopaths and chiropractors. When I finally saw him, the condition was doubtless much more advanced, but the very way he walked into the office drew attention to his dead reflexes and led to an easy diagnosis of gastric crises of locomotor ataxia. How often do we know of cases of occular disease or vascular hypertension where the attending physicians have failed to recognize a chronic nephritis because perhaps one or two perfunctory examinations of the urine have failed to show albumin. Such patients are not infrequently referred for more technical examinations, when more frequent urinary testing, especially after exercise, or comparing the morning with the evening urine would establish the diagnosis at home, and the simple taking of the specific gravity of each specimen voided in the 24 hours, with the recognition of a fixed low specific gravity would confirm the diagnosis and give an approximate idea as to the degree of retention.

I recently saw a patient from a neighboring town, who announced that she had an "inward goitre", and that she was not improving under the treatment she had been receiving. She discontinued medical treatment and took chiropractic "adjustments", but felt worse as one would naturally expect. She did have a moderately enlarged thyroid, no exopthalmos, only slightly increased heart rate but no demonstrable hypertrophy; no tremor, some increased fatigue reaction. Routine examination however, showed enormously hypertrophied tonsils with retained material in the crypts, which had not been discovered, but which in my opinion and that of a competent throat specialist were quite enough to account for all of her symptoms and certainly should receive attention before considering any operative goitre treatment.

How often are malignant conditions overlooked or unrecognized until they have become inoperable and beyond the hope of remedial measures, for the lack of a general routine examination!

There is urgent need for more thorough routine, complete physical examinations and in the periodic health examination I see a great opportunity for awakening of interest in the old tried out methods and a hope for the regaining of the habit of using them, with an increase in the skill and technic essential in their employment.

There is one more thought that I wish to present to you to suggest a way that may

make us more efficient in our warfare against disease. There are some, even in our own ranks, who are inclined to cavil at one branch of our organization, and feel that it has not kept step with the general progress, and that is therapeutics. When, however, we consider the conditions in that subject only fifty years ago, the general polypharmacy the multitude of drugs advocated, the claims for the recognition of which were based chiefly on empiricism, the general lack of scientific data by which these claims could be substantiated, the little or no standardization of the potency of drugs, and review the reforms that have been made, the useless drugs discarded, the experimental proving of the therapeutic action of the remainder, the establishment of standards of strength for those in general use, and the valuable additions to our pharmacopoeia, I feel that such criticisms are unjust and untrue. There is one branch of this department however, which has been neglected and undeveloped to the great loss of the public, to practitioners not only in general practice but to those in practically every specialty and therefore this should interest the whole profession. I refer to the more or less mechanical or so called drugless methods of treatment. From time immemorial, drugless methods of treatment have been advocated by individual, sometimes within the profession, at other times by some outside of it. Often as in certain well known modern instances, they have been organized as systems of treatment, claiming to cure everything and based on false theories of anatomy and physiology, are absurd and not worthy of serious consideration, but there are certain other methods of treatment such as massage, mechanotherapy, the use of electricity, heat, light, hydrotherapy and the like which have not received the attention they merit. They have been used sporadically, but have not been taught sufficiently in our medical schools and our profession as a whole is not familiar with their application or the conditions for which the different methods should be applied. Occasionally, under the hypnotic eloquence of a salesman, we purchase some device and try it with little discrimination on various patients, and then discard it in disgust.

As a result of this attitude, these methods have too often been seized upon by charlatans who use them with no discrimination at all, with resulting harm to the public and still further discrediting of what may be useful therapeutic measures if properly understood and properly applied.

It is sincerely to be hoped that the new council of the American Medical Association by its investigation and reports may accomplish for us somewhat that the Council on Pharmacy has done in the reform of drugs, to the end that we may come to a better understanding of the indications for the use of such additional aids in treatment, what we may actually expect from them, and how to employ them. It is very possible there may be some good wheat in the abundance of chaff, and if so, it behooves us to know it.

There is certainly a large class of cases, often chronic in character before which we often feel helpless when it comes to drug therapy. These are the patients that drift from one physician to another; these are the ones to whom the itinerant quack directs his appeal when he advertises himself as a specialist in chronic diseases, these are the main support of the numerous cults which have multiplied so greatly in recent years. I do not mean to intimate that some new "cures" may be discovered in these methods but we must recognize that many people of this type earnestly feel that medicines have failed to help them, just as we have felt our own impotence in trying to aid them. With the undoubted effects that can be induced on the circulatory and nervous systems, on elimination and metabolism by other means than drugs, we may at least make these people more comfortable, lighten the load of over-taxed organs, ease the pains and worries to some extent, and perhaps really prolong their lives. Here it seems to me is the next obligation of our profession. We should investigate with an open mind, discard the useless, refute false claims, but avail ourselves of any means of value in treating human ailments, and so again justify our claim as practitioners of the true faith—Modern Scientific Medicine.

DILATATION AND MALPOSITION OF CECUM AND ASCENDING COLON DUE TO DEVELOPMENTAL DEFECTS *

By E. BENNETTE HENSON, M. D.
Charleston, W. Va.

DILATATION and malposition of the cecum and ascending colon may be due to a number of causes, such as: tumor within or outside of the colon causing a constriction of the lumen at or beyond the hepatic flexure; adhesions from some abdominal operation; acquired adhesions as described by Lane; and the deformities due to faulty fusion of the mesentery of the ascending colon.

Space will not permit discussion of any of the above except that of congenital origin. Embryologists describe the development of the intestinal canal of man in terms of elongation, rotation, fusion and fixation. Briefly stated, the large bowel develops by elongation of the mid-gut, the cecum and ascending colon being at first in the left side but about the sixth month of foetal life rotation takes place along with the stomach, which places the cecum and ascending colon, with its mesentery, in the right side of the abdomen posteriorly where the peritoneal covering of the bowel comes in contact with the peritoneal covering of the posterior abdominal wall and the two surfaces fuse, (fusion of peritoneal surfaces is peculiar to man—in the quadruped no such action takes place)[1] and the colon becomes fixed; the upper portion, the cecum, lies in the iliac fossae and rests on the ilio-psoas muscle above the inner half of Poupart's ligament. In normal fixation, there is probably one-fourth the circumference of the gut without the peritoneal covering.[2]

Post Mortem Findings

Anatomists have called attention to the large percentage of cadavers in which there was a primitive meso-colon, faulty fusion of the mesentery. Treves,[3] as quoted in Gray's Anatomy, states that in one hundred subjects examined by him there was neither an ascending nor descending meso-colon in fifty-two subjects. In other words, forty-eight had a meso-colon, which means that proper fusion had not occurred in that many subjects. The estimate of the abnormal ranges from 18 to 48 per cent. Waugh[4] found in a series of post-mortem examinations of children under twelve years, that there was a primitive mesentery, or meso-colon, or a portion of it in twenty per cent of all cases examined without regard to cause of death. In other words, eighty per cent had normal fixation of the right side of the colon.

Clinical Classification

Waugh[5] makes a clinical division of his cases into five types, according to the predominating clinical symptoms presented by the patient. They are: gastric, duodenal, biliary, renal and right iliac type. One cannot search the literature without being impressed with the work being done by Waugh of England. His classification is a good one but it covers a larger field than is intended in this paper, (since we are discussing here only the malfusion of the colon on the right side).

Embryonic Classification

Dr. Robert C. Coffey of Portland, Oregon, in his classical monograph,[6] in which he has brought gastro-enteroptosis to its proper place in surgical literature, divides right-sided ptosis into four types or degrees which he states is an arbitrary division based upon

* Read before the West Virginia State Medical Association at Bluefield, June 12, 1925.

the mobility of the cecum and ascending colon. His classification will be followed in this paper and for that reason I wish to quote him at length.

"There are, of course, a great many variations in the type and extent of non-fusion. I have divided right-sided nonfusion into four arbitrary types, all of which have been seen personally by me and pictured by Mr. Trahar. First, I will mention the type nearest to normal, namely, a simple mobility of the cecum with normal fixation of the ascending colon. It is probable that this type of case in a patient with ordinary normal intra-abdominal pressure rarely gives trouble. However, it is occasionally found that in such a case the cecum becomes distended, probably by gas and habitual constipation, falls over into the pelvis and develops pathological conditions, including the formation of membranes. The second degree of nonfusion is probably the one which creates most pathology. In this case, the colon has rotated over as far as and attached to the front surface of the kidney, the rest of the ascending colon and cecum remaining mobile. Third, the large intestine has apparently not rotated over further than the front surface of the duodenum to which it attaches and hangs as a dead weight, all of the ascending colon and cecum having a long mesentery. The kidney is exposed. In the fourth type of non-fusion which we have described, the ascending colon has not fused to the parietal peritoneum, and the kidney and duodenum are entirely exposed just as seen in the quadruped. Floating kidney is rarely seen either in type three or four, lending much evidence to Longyear's theory that the kidney is dragged out of its position by the attached colon. From these four stages or types there are an infinite number of gradations even from the extremes of nonmigration of the cecum from the left side, and in one personal case, there was an extension of the duodenum down around the end of the cecum, just as it is found in the dog. It is unnecessary to relate all these variations in the development of the general conception."

What Constitutes a Normal Cecum?

It will be noted that Coffey regards the normal cecum as relatively non-mobile and the drawing in his monograph of the normal cecum shows it to be rather firmly fixed. At operation I am sure that few surgeons really know the normal from the abnormal. Normally, it is but little mobile in the lateral direction, its displacement not surpassing one or two centimeters. In a vertical direction its mobility is greater. As seen through the screen, the mobility is from two to six centimeters. When the displacement of the cecum in both directions reaches and exceeds nine to ten centimeters it is said that the "cecum is mobile," (Wilms). The size of the normal cecum as given in Gray's Anatomy, is seven centimeters in length and nine centimeters in breadth. In 90 per cent of cases, the cecum is completely enveloped by peritoneum.[7]

It is reasonable to assume, then, from the above description that a normal cecum lies in the right iliac fossa completely enveloped by peritoneum and held firmly by a fixed ascending colon which allows not over 10 centimeters movement in any direction and whose diameter does not exceed 12 centimeters. With the normal cecum in mind, I wish to invite your attention to that large army of unfortunates whose maladies have been labeled "chronic appendicitis" and when operated upon the appendix is found normal, but the cecum is found wedged in the pelvis and is lifted up with more or less difficulty. On close inspection, the ascending colon is found freely movable and the hepatic flexure is easily drawn through the incision onto the abdomen, yet the surgeon only removes the appendix with the remark that he thought from the symptoms that the appendix would be bound down by adhesions. The patient improves for a few months, then the same symptoms return. The pain in these individuals remain constantly of one type, seldom changing in position or character, but seldom of the same type or character in two individuals. One familiar with the condition present at operation would expect the symptoms to return if some method of fixation was not employed. The ascending colon normally lies upon and is fixed to an inclined plane of 51 degrees and when in the upright position therefore

this 51 degrees slope absorbs 30 per cent of force applied from the perpendicular.[8] While the patient was convalescing from the operation, relief was obtained but when returned to the routine of life, the faulty fixation deprives the ascending colon of the 30 per cent protection; as a consequence, the loaded cecum is again allowed to sag into the pelvis, and there becomes distended with gas, producing pain in the right lower quadrant of the abdomen.

If the proper study of the gastro-intestinal canal had been made on this patient in the beginning, the true condition would have been recognized and the proper surgical measures instituted.

A case very similar to the above did have the proper study and as you will see from her record, an operation was avoided.

Mrs. A. age 37, height 66 inches, weight 97 pounds, best weight 109 pounds, presented herself for treatment for "indigestion" with the history of being almost a complete invalid for three years following a severe attack of pain in the right side which required four days rest in bed. The attending physician at that time was not sure of the cause but was inclined toward the diagnosis of gall stones. About every three months thereafter, she had attacks of pain in right side lasting one or two days. As she remarked: "I never feel good between attacks." One of our best internists gave her about twenty treatments of gall bladder drainage with indifferent success. (The diet probably helped her). Examination under the fluoroscope was very interesting. The cecum and ascending colon had sagged below the crest of the ilium; the stomach had not emptied properly and a peculiar arrangement of the spleenic flexure was noted. The ascending limb of the transverse colon was external to the descending colon and approached the spleenic flexure from the rear. No other abnormal findings were noted. Rest in bed for two weeks with the foot of the bed elevated, forced feeding and graduated exercises gave her complete relief. She has been in perfect health and when last seen, eight months after first treatment, she weighed 127 pounds and the abdominal muscles were strong and the position of the colon and stomach were greatly improved.

Posture

Posture plays a very important role where ptosis is present until we have come to look upon certain deviations from the normal as typical of the ptotic individual, the majority of which are of the female sex. The fact that these women improve so remarkably while pregnant and then soon after begin a gradual return to their former state should have been known in other years as due to some faulty attachment of abdominal viscera now being supported by the enlarged uterus, which has at the same time increased the intra abdominal pressure so sorely needed. A peculiar phenomenon following pregnancy occurred in a patient of mine just in the past few months. Strange to relate, however, this woman is in posture exactly the direct opposite of the type just described, and before pregnancy was a hale and hearty athlete without any symptoms referrable to the abdomen; however, during pregnancy, she had an occasional mild attack of indigestion; and after the birth of her child had frequent attacks of severe indigestion. The condition is of sufficient interest to justify a short history.

Mrs. T., age 25, robust health until pregnant when an occasional attack of indigestion occurred after a heavy meal. One month after her first child was born, she began having violent attacks of "indigestion" which were so alarming that twice I was called after midnight to give medical aid. (McConnell speaks of attacks at 2 a. m.)[9] The stomach was found to be greatly distended, as well as the whole abdomen, with severe pain in the epigastrium. High enemas gave no relief at first, but by the simple expedient of lowering the head while the enema was being given, immediate relief was obtained on account of eructation of a large amount of gas. Between these attacks she was fairly comfortable but she had no appetite. Four months after the birth of her child, an X-ray of her intestinal tract was done and a rather unusual condition for one of her type was found. The stomach was at the brim of the pelvis and only 80

per cent empty in 6 hours, but was otherwise normal. The duodenum was very large and easily demonstrated. The cecum and ascending colon were much lower than normal, and freely movable allowing internal rotation to the midline. While examining her under the fluoroscope I realized that in giving birth to a child her intra-abdominal pressure was suddenly diminished, the abdominal muscles had remained relaxed and upon lifting and caring for her child and other heavy lifting after having been in bed one week. She also suddenly recalled having lifted a heavy piece of furniture some weeks before and suffered a distinct abdominal pain which she thought nothing more about, the colon which was without normal fixation, slid down into the pelvis, causing a drag upon the duodenum, producing duodenal arterio-mesenteric ileus due to the constriction of the third portion of the duodenum by the drag of the superior mesenteric artery across it at this point.

The above conclusions, I feel are warranted by her rapid return to health by treatment in bed with the foot of the bed elevated, forced feeding and graduated exercises. The fluoroscopic examination after four weeks' treatment showed the emptying time of the stomach to be normal, a dilated duodenum could not be demonstrated and the hepatic flexure was about 5 cm higher. The abdominal muscles were very firm and she considered herself in excellent health.

The dilatation of the duodenum was met with in another patient who was of the typical ptotic type and who typically represented Dr. Coffey's idea of complete right sided non-fusion of mesentery and on whom his method of surgical procedure "right indirect colopexy and omento-colopexy" was carried out at operation January 1, 1925:

Miss R. S. age 36, stenographer, 70 inches in height, present weight 76 pounds, first came under my observation in June, 1922, complaining of weakness, nausea and occasional vomiting with severe shifting pains in the abdomen. Physical examination and laboratory findings were negative. She was kept in bed in a hospital for ten weeks on account of profound exhaustion and it was four months after leaving hospital before she regained sufficient strength to return to work. Weight had increased to 89 pounds. I did not see her again until September, 1924. She was in a worse condition than when first seen in 1922. How she had been able to work is a mystery for she was a good specimen of a "walking skeleton". The scales balanced at 72 pounds. She was hardly able to walk to an automobile that was to take her to the hospital.

Fluoroscopic examination, patient standing, revealed a stomach larger than normal with moderate ptosis; duodenum enlarged fully three times. The cecum and ascending colon were in the pelvis, the transverse colon was very long, the loop lying in the pelvis, a mid-line ptosis. Patient in the Trendelenberg position, the duodenum still enlarged but nearer diaphragm. The hepatic flexture in normal position with cecum still in pelvis and the loop of elongated transverse colon still in pelvis refusing to be dislodged by examining hand.

Fortified with this knowledge, her history was read with a new meaning and the following facts were obtained: States she was never of robust health but comfortable. At sixteen she enjoyed her best weight which was 117 pounds, until she received a severe injury by jumping into a high hammock which promptly broke, giving her a hard fall which kept her an invalid for over six months. The chief symptom was pain in the abdomen. In her own words, "I have never been well since that fall and gradually lost weight, but no one ever believed that had anything to do with what ails me, so I just quit mentioning it."

She was treated by rest in bed with head lowered, forced feeding and massage with but little improvement in weight. The vomiting stopped but the nausea continued. She did not show any progress in three months. It was decided to do a Coffey's "right indirect colopexy and omento-colopexy" and the abdomen was opened January 1, 1925. The entire ascending colon and hepatic flexure was brought out of the wound and a photograph made, showing colon 12 centimeters outside of abdomen. The duodenum was about 5 centimeters in diameter but the wall was not thickened at any point and for that

reason a duodeno-jejunostomy was not attempted. The fixation and plication of cecum and ascending colon was done after the method of Coffey. The patient made an uneventful operative recovery and in two months had gained six pounds. The nausea had entirely disappeared and four months after operation she returned to work but is still far from a normal individual.

Associated Ptosis of Right Kidney.

Msot investigators mention the frequent occurrence of a mobile right kidney in conjunction with a mobile colon. Some place the frequency as high as 79 per cent.[10] I have not tabulated the cases coming under my observation but the relative infrequency of the occurrence has impressed me. In fact my interest in ptosis was first aroused by a case with marked ptosis of ascending colon with a perfectly firmly attached right kidney and a normally placed stomach.

Importance of History of Abdominal Injury.

I have made it a routine practice to obtain a careful history in regard to loss in weight as it is surprising how frequently the history of ill health really began after some abdominal strain. After obtaining a history of strain, the patient then recalls that loss in weight occurred before the symptoms now complained of began, the patient never attaching any importance to this fact. Three patients coming under my observation strikingly illustrate this point. One woman lifted a heavy piece of furniture, another had prolonged and frequent attacks of coughing the result of bronchitis, and a man was forced to hold a heavy piece of machinery to protect a fellow workman.

An individual with some remains of a primitive mesentery may be in good health until some violent force has concentrated upon the ascending colon lying peacefully upon the inclined plane of fifty-one degrees, forcing it off its ledge into the pelvis. Once over the pelvic brim, the cecum becomes distended with gas, loss of appetite ensues and there is naturally a loss in weight which starts a long chain of symptoms which may similate any one of the types described by Waugh.

Treatment.

A careful study of the intestinal tract under the fluoroscope with two or three plates for record purposes, will practically always suggest the rational treatment for that particular individual. In front of the screen in the dark room is the place to write your prescription. It is in the dark room where you actually see what part posture plays in the causing as well as relieving symptoms. The treatment is in truth medical treatment without medicine, and in 75 per cent of cases surgical treatment without the use of the knife.

Importance of Fat.

One cannot speak of treatment in these cases without thinking in terms of fat. The role that fat plays in the relief of these individuals is the all important one. To enter into the discussion of intra-abdominal and intra-visceral pressure, would lead us too far into physics, but one must bear in mind that the desired object is to increase intra-abdominal pressure and decrease intra-visceral pressure. By increasing intra-abdominal fat the desired object is obtained, this means of course, increase in weight. It is not only important the taking on of fat, but of almost equal importance is the distribution of fat. This can be accomplished by simple abdominal exercises as advocated by Dr. Franklin H. Martin,[11] which strengthen the abdominal muscles.

New Use for Old Methods.

Treatment can well be said to be a combination of Dr. S. Weir Mitchell's treatment for neurasthenia and Dr. Franklin H. Martin's treatment for postural defects. The results will be most gratifying especially if one accepts Alvarez's[12] theory of peristalsis and Barclay's "mass movement" as prescribed according to their teaching.

The "smooth diet" of Alvarez has proven very satisfactory to me in the treatment of certain cases, where bulk was not to be desired. On two occasions while watching the action of the large bowel I have noted the mass movement mentioned by Barclay and in one case I thought I demonstrated the "point D'appui" essential to such movement.

Surgical Treatment.

A thorough trial of non-surgical measures will fail to relieve a small percentage of individuals. Some form of surgical fixation is then advised.

Someone has aptly remarked that orthopedic surgery then enters the abdomen, to straighten and stabilize congenital deformities. During the past three years we have at the Charleston General Hospital used some form of surgical fixation in 30 cases. The principles advocated by Dr. Coffey have been applied.

SUMMARY

Fusion of mesentery is peculiar to man.

Eighteen to forty-eight per cent of human race is born without perfect fusion.

The mal-fusion may or may not give symptoms depending chiefly upon the maintenance of proper balance between intra-abdominal and intra-visceral pressure which keeps the loosely attached cecum and ascending colon lying upon an inclined plane of 51 degrees.

Normally, this proper position is maintained by intra-abdominal fat, correct posture and a strong anterior abdominal wall.

Ill health may have its beginning when this relationship is interfered with. The most frequent cause being due to loss in weight.

This loss in weight is usually preceded by some severe abdominal strain, such as: violent coughing, lifting heavy machinery, falling or anything that will cause the cecum to sag into the pelvis and thereby cause a drag upon the ascending colon producing cecal stasis with the resulting toxemia.

Non-surgical measures relieve fully 80 percent of individuals, but in a small percent some method of surgical fixation such as advocated by Coffey or Waugh will have to be employed.

BIBLIOGRAPHY

1. Coffey, R. C.: Gastro-enteroptosis, D. Appleton & Co., 1923.
2. Small, A. B.: Southern Medical Journal, 1924.
3. Treves: Gray's Anatomy, Eighteenth Edition.
4. Waugh, G.: Brit. M. J. 2. 1016, 1922.
5. Waugh, G.: Brit. Journal of Surgery, Jan. 1920.
6. Coffey, R. C.: Monograph. D. Appleton & Co., 1923.
7. De Martel and Antoine: Psuedo-appendicitis, F. A. Davis Co., 1925.
8. Coffey, R. C. D.: Appleton & Co., 1923.
9. McConnell, A. A.: Brit. Journal of Surgery 10:532, 1923.
10. Waugh, G.: British Medical Journal, 1922.
11. Martin, F. H.: Surgery, Gynecology and Obstetrics, 15:150.
12. Alvarez, W. C.: The Mechanics of the Digestive Tract, Paul B. Hoeber, 1922.
13. Barclay, A. E.: Brit. Journal of Surgery, 1915.

SURGICAL ASPECTS OF THE THYROID *

By DR. L. HOWARD SCHRIVER
Cincinnati, Ohio

MANY HUNDREDS of years ago Celsus wrote: "No man is qualified to treat a disease of the nature of which he is ignorant."

Through the ages, the practitioner has been treating diseases the nature of which was not yet discovered with remedies the virtue of which he was mostly ignorant.

The Thyroid Gland in its various pathological states presents a case that bears out the truth and the present day application of the above statement.

This gland is today commanding ever increasing attention because of the apparent increase in the prevalence of the pathological processes affecting it, which manifest themselves by various symptoms. The keenest interest and fascination of many laboratory and clinical observers are centered upon this structure, because of the apparent increasing numbers of persons suffering some form of thyroid disease and the persistent failure of investigations to arrive at the cause of these processes.

Investigation and study of this gland goes back many centuries. Hyppocrates recog-

* Read before the Cabell County Medical Society at Huntington, November 12, 1925.

nized goitre and gave a clear description of it. Endemic goitre was recognized by Pliny and others who observed the prevalence of this condition in the Alps and Tyrol. Pliny even mentioned the drinking of certain water as an associate of Endemic goitre. Marco Polo mentioned the incidence of goitre in Chinese Turkestan as early as 1272 A. D. Ruggiero writing in 1180 A. D. suggested the use of Ashes of Sponge and Seaweed for the relief of this condition. This is probably the first recorded instance of the recommendation of iodine in the treatment of goitre.

Paracelsus writing in the Sixteenth century was the first clinician to establish a relationship between Cretinism and Endemic goitre. This was the result of studies in the Salzberg region. He was of the opinion that mineral constituents of water entered as a causative factor in the production of goitre.

History throughout the ages makes mention of the observation of goitre, to go into details time does not permit.

The earliest mention of accurate association of hyper-thyroidism and the symptoms produced by this disease is that of John S. Pavry in 1786. The account of this case was published after his death in 1825. In all he observed eight cases.

Graves in 1835 paved the way for the study of the physiology and pathology of the thyroid when he definitely linked the classical Exophthalmos and Tachycardia with hyperplasia of the Thyroid and termed the condition Hyper-Thyroidism. Charcot later added the Tremor.

Basedow in 1840 affirmed the work of Graves and this disease has since been known as Graves' or Basedow's disease.

Thomas Blizard in 1850 was the first to note and describe Myxedema. Riverdi and Horsley inaugurated physiological surgery of the ductless glands.

Claude Bernard's work on Glycogenic function in 1847 to 1857 and Addison's account of disease of the Supra-Renals 1849 to 1855 were the beginning of the doctrine of internal secretion. In 1884 Schiff produced 60 cases of fatal Thyroid excision in dogs and immediately thereafter Murray and Howitz began to treat Myxedema by the administration of Thyroid Extract. Horsley and Felix Semon showed that Cretinism, Myxedema, and Thyreo-Struma-Priva are one and the same.

In 1906 Pyr transplanted Thyroid Gland from a mother to her Myxedematous child's spleen with excellent results.

Theodor Kocher in 1878 performed the first Thyroidectomy on a human patient.

It is very apparent that much work was done between 1835 and 1884 by these workers on the Thyroid and other ductless glands. In fact very little has been added since that would throw a great amount of light on the subject in reference to the fundamental causes of diseases of these structures.

Cretinism is well known to be due to congenital absence, atrophy, or total extirpation of the Thyroid. Kocher very early believed there was a definite association between Goitre and Iodine deficiency. Long ago some inexplicable relationship was known to exist between the Thyroid and the regenerative organs, as noted by Thyroid disturbances at the time of puberty and in the pregnant state. The above observations are not recent and any other causative factors have not to the writer's knowledge ever been proven. Stress of modern life, worry, diet deficiences, focal infections, or any agent drawing on the Thyroid in excess of normal for its stimulating secretion have all been put forth from time to time as activating factors in the production of Thyroid disease, but these have not borne sufficient evidence to solidly link them with Thyroid diseases. All must no doubt play a part as aggravating factors but cannot with the present evidence be accepted as primary or causative factors.

Because of these conditions we find ourselves treating disease the symptoms of which we recognize but the cause remains one of nature's many mysteries. Therefore the best we have to offer is treatment of results with the possible exception of Endemic or Colloidal goitre.

Surgical Aspects of the Thyroid

Records do not reveal any evidence of there having been established any rational treatment for the cure or amelioration of these diseases nor the symptoms thereof, until

Kocher performed the first Thyroidectomy on a human patient in 1878. Since Graves described Hyperthyroidism litlte has been added to our knowledge of etiology of disturbances of this structure. Aside from the theory of deficiency, advanced by Marine and Kimball, none of the many theories has been proven.

But during the past nearly half century, much has been accomplished in the relief of the morbidity of Thyroid diseases. This accomplishment has been definitely due to surgical-clinical research. It is not probable that through this channel the solution of this problem will be reached. That which has been gained by surgery has been paid for in full. Early surgery was attended by a mortality only too high. With persistency, faith and intensive study, resulting in better interpretation of certain signs and symptoms, we have gained protection from the mistakes and pitfalls that befell the pioneers of this work. Refinement of technique has added its full share to reduction of mortality.

It must be conceded that the surgical treatment is empirical just as the treatment of any disease, by any method, must be so long as the etiology of that disease is unknown. Because this latter statement applies to disease of the Thyroid we find many types of treatment advocated and practiced for their relief. Reports of end results in certain of these conditions seem to justify the faith invested in them. But the essayist believes, that in cases where the disease is well established or severe, surgical treatment is indicated for the relief and possible cure of the patient.

Long before the Abdomen opened its doors to the surgeon, a small percentage of patients suffering from suppurative appendicitis recovered. Before Jenner discovered vaccination against small pox some patients recovered, and others exposed did not contract the disease. Before diphtheria antitoxin some sufferers from this disease recovered. Millions probably recovered from pulmonary tuberculosis before this disease was understood and treated in a scientific manner. They did not all succumb because of our endowed resistance, which we automatically spend in combatting any pathological condition; also because no disease is standardized in its virulence. Some of these visitations were not severe and the body politic rose to the occasion and overcame the disease. So it is with the thyroid, some of its affections are transient, resolving without any treatment. Others are somewhat more severe demanding conservation of the resistance of the patient supplemented by certain supportive and corrective measures of treatment. Lastly there are those which absolutely demand active and aggressive removal of the disease from the patient. This last statement is made with the full understanding the removal of the thyroid is not in a scientific sense the removal of the disease, for as yet the thyroid has not been proven the primary offender.

The thyroid is one of the organs about whose physiology we know little. It is subject to disturbances to which, because of certain symptoms and morphological characteristics, we have given names of identification. Some of these do not offer ground for debate in a symposium of this kind. These conditions are only mentioned here. Malignant diseases affect the thyroid as primary diseases, namely, lymphoma, lympho-sarcoma, sarcoma, carcinoma, and adeno-carcinoma. Benign tumors as cysts and adenomata. Tuberculosis and acute suppurative inflammations. All must admit the above are surgical and should be treated as such.

It is felt that a special plea should be made for the early surgical removal of cysts and adenomata, because in many cases of malignancy these benign tumors have been the forerunners. In fact a large percentage of malignant diseases of the thyroid reveal the existence of benign tumors for years and pathological examination proves they have undergone malignant change.

Adenomata should be removed because they seem to activate the thyroid and produce toxicity in its gravest form in some cases. The exclusion of the above conditions leaves the debatable field narrowed to hyper-thyroidism, not due to adenoma, and simple colloid goitre.

The thyroid has received much attention from the endocrinologist, chemist and clin-

ician, but its behavior in both its physiological and pathological states remains an enigma. Because of this ignorance treatment of the pathological processes has been directed toward the removal of these or the symptoms produced by them. The method of treatment employed depends on the clinician's choice. He chooses that which he believes to be the safest for his patient and is also productive of satisfactory end results. One exception to this state of affairs exists, namely, colloid or endemic goitre. In this condition we are more fortunate because the etiology of this very prevalent malady is now understood. Here prophylactic treatment has given excellent results, when given under proper supervision. In some instances administration of iodine has been productive of good end results, when given as a curative medication.

The essayist believes in well established colloid goitre, causing symptoms either mechanical or toxic, the only present successful treatment is extirpation of the thyroid. Thyroidectomy for colloid goitre is not an exceedingly dangerous procedure and the end results gratifying. Recovery is prompt, usually the patient is incapacitated a week or ten days. Other treatments are not likely to produce amelioration of the disease and may be the cause of other more serious conditions.

Hyper-thyroidism is that condition inexplicable in its etiology that we identify by certain clinical symptoms, a clinical laboratory test, and morphological characteristics found in the gland by microscopic examination. Further than this we have not traveled. It is the present day end of the road.

This disease does not follow a stereotyped course. In some instances the onset and course of the disease are mild, presenting difficulties in the making of the diagnosis.

It is in these cases the essayist believes the etiological factor, whatever it may be, is only sufficiently potent to disturb the thyroid to a limited degree. The metabolic processes are accelerated slightly, producing a diminution of physical and nerve resistance only so much that the routine efforts of life become burdensome; but not sufficient to compel the patient to voluntarily change his or her routine habits. These patients are often diagnosed as neurological cases and are sometimes confused with psychiatric states.

A second type in which the metabolic processes are accelerated 15 to 25 per cent, which is productive of more symptoms—loss of weight, physical and nervous instability—to a point where routine activities cannot be carried on.

A third type exists in which the metabolic processes are accelerated from 25 to 100 per cent and the symptoms of extreme toxicity are present. This latter condition may be the result of unrecognized and untreated types, one and two; permitting the metabolic acceleration to continue, producing a progressive lowering of the resistance index, and calling forth a greater acceleration of metabolism for the execution of life's functions. Thus a vicious circle is established.

This third type is sometimes brought about in what might be termed explosive suddenness, having no history of preceding hyperthyroidism or enlarged thyroid.

We as clinicians are primarily interested in restoring our patients to health by the surest and safest method of treatment and, secondarily, as economists in the shortest possible time.

In keeping with this ideal, the essayist is of the opinion that the third class, with our present insufficient knowledge, falls into the domain of surgery for its cure.

The reasons for this are as follows:

Most of the type two cases that become type three have had some form of treatment before they became type three. It is difficult to carry out proper treatment in some cases, over a long period of time. Cooperation of the patient cannot be obtained in some instances. Some of these cases get temporary relief and recur on resumption of routine life. Others there are, even when cooperation is given by the patient, treatment is of no avail and the condition progressively becomes more pronounced. In the last two types there seems to be a complete loss of balance between the thyroid and normal body function. Secondly, because the essayist knows of no other method of treatment that will produce amelioration of this disease as

promptly as surgery. Thirdly, it is imperative in these cases to avoid serious complications and sequelae of hyper-thyroidism such as organic myocardial changes, kidney changes, mental and neurological deterioration, complete constitutional exhaustion and finally death. Only too well does the surgeon realize the fallacy of too long continued conservative treatment. Joslin of the Lahey Clinic says: "More and more is expected of the surgeon. Cases are turned over for operation presenting serious complications and we expect good end results." One cannot hope to cure the tachycardia if there is an existing myocardial degeneration. This is one of the tangible conditions that is present in certain long standing cases. It is fair to assume that permanent changes do take place in other organs and systems that because of our insufficient understanding of their physiology we cannot predetermine the damage already done. If this hypothesis is true, then the few cases that fail to recover, fully, should not be classed as surgical failures.

With present day selection of patient, the time to operate chosen by correct interpretation of certain clinical sign and the basal metabolism reading, intelligent decision as to the operative procedure, the execution of this operative procedure with accepted technique, makes thyroid surgery relatively safe. To emphasize the above the following routine should be followed:

No patient should be operated upon for hyper-thyroidism until that patient has been studied carefully, both in reference to the hyper-thyroidism and the general condition of the patient. No case of hyper-thyroidism is ever an emergency. If there is not time to study the case that case is one that should not be operated.

Clinical and laboratory determination of the degree of toxicity should be arrived at. This can only be accomplished by absolute rest in bed and repeated basal metabolism estimations. Repeated basal metabolism estimations will be of value in determining the response to rest in bed and medication.

Pre-operative and post-operative administration of Lugol's Solution is indicated. It enhances the margin of safety and permits of more radical operation in certain cases. In a large proportion of the cases preliminary polar ligations are not necessary. Post-operative hyper-thyroidism seems to be greatly reduced by the use of Lugol's Solution.

Always operate in the presence of a descending basal rate if possible. Never operate in the presence of an ascending rate, this usually indicates the presence of a crisis or an approaching crisis.

One's personal clinical judgment must decide on what type of operation is to be done. It can be generally stated, one should not attempt too much. Many times, ill-timed one stage sub-total resection operations have been responsible for operative deaths. It is better to do less than planned sometimes and go back for completion.

Sub-total resection is the operation of choice for permanent cure. By this is meant removal of three-fourths to five-sixths of the gland. Resection within the posterior capsule is paramount for the safety of the recurrent laryngeal nerve. The operation should not be done hastily but should be done as quickly as commensurate with good surgery. Nitrous-oxid-oxygen anaesthesia is the one of choice. It permits of shorter operating time and protects the patient from psychic shock. Wounds should be drained for 48 hours. Liberal use of morphine immediately before and immediately after operation cannot be emphasized too much. The patient's tissues should not suffer from insufficient fluid content. Subcutaneous salt solution and glucose solution by the gravity method have given the best results.

Although every known precaution is used, there is still a definite mortality following the surgical treatment of thyroid disease. The present mortality is due to surgical accidents and complicating diseases.

Post-operative crisis, referred to above, one of the most feared complications has been lessened in its occurrence by the use of Lugol's Solution. The essayist has not seen a post-operative crisis since the advent of Lugol's Solution in this field.

Status Lymphaticus, a rare complication, occurs in the presence of a persistent thymus.

Tetany in the early days of thyroid surgery occurred more frequently than at present. Extirpation of the para-thyroids is solely responsible for this fatal complication.

Tracheal collapse has been accountable for some fatalities. One should always be prepared to intubate or tracheotomize those patients presenting large thyroids or complaining of dyspnea before operation.

Hemorrhage and pneumonia are ever present potential dangers, in any operative procedure, likewise with embolism.

Complicating diseases as myocarditis, renal insufficiency, diabetes, etc., swell the death rate as they would in any other surgical procedure.

Although not contributing to the death rate, except when bilateral, injury to the recurrent laryngeal nerve is an accident that not only causes discomfort to the patient but is embarrassing to the surgeon. One should routinely inspect the vocal chords before and after operation.

Myxedema may result from excessive resection of the thyroid. In fact it will be interesting to determine the incidence of this disease in thyroidectomized patient in years to come.

SUMMARY

The surgical treatment of hyper-thyroidism is not ideal; instead it is definitely empirical.

With our present insufficient knowledge, it offers the best opportunity for cure in the severe cases.

The results warrant its continuance for the present. Cures can be safely placed at approximately 75 per cent. Mortality in the hands of the skillful should not exceed from 3.5 per cent to 5 per cent.

Complete recoveries should not be anticipated in complicated cases.

Hyper-thyroidism is not only a thyroid question, as evidenced by recurrence of symptoms after radical resection of the gland, in some cases.

Surgery will not solve this question.

To date no theory of its etiology has been proven.

The solution of hyper-thyroidism will depend on research in biological-chemistry.

MEDICAL BILIARY DRAINAGE *

M. I. MENDELOFF, M. D.
Charleston, W. Va.

MY OWN personal experience with this method of treatment dates back to July, 1923. Since then I have treated 27 cases. Most of the patients were treated in the office, a few had preliminary treatments at home or in the hospital before being treated at the office.

In speaking of the medical biliary drainage I shall keep clear of the various discussions which have arisen as to the results of this method of treatment by various physiologists and surgeons who have challenged the method as being unphysiological and that the results ascribed to this method of treatment were due to the psychic effect on the patient.

The underlying principle on which this method is based is founded on the observation of Meltzer who demonstrated that when a solution of magnesium sulphate is applied to the sphincter oddi muscle there is a relaxation of the muscle with a simultaneous contraction of the gall bladder with expulsion of its contents.

The biliary system is made up of the liver, gall bladder, and the common bile duct. The liver empties itself by the means of the hepatic duct which joins the cystic duct, to form the common bile duct which empties

* Read at the meeting of the Kanawha Medical Society, Charleston, W. Va., January 5, 1926.

into the first portion of the duodenum into the ampulla of Vater. The opening of the duct into the duodenum is guarded by the Sphincter Oddi muscle.

The gall bladder is considered by some to be an excretory organ and by some as an organ of concentration. How the gall bladder empties itself is not definitely known, but it has been shown that when the duodenum is stimulated with magnesium sulphate there is seen an expulsion of the gall bladder contents.

Of what use is the biliary drainage? Its use is justified because it enables us by studying the contents of the bile to formulate an idea as to the presence or absence of pathology in the biliary tract, and after pathological evidence has been ascertained it enables us to treat these cases in a very satisfactory manner.

We are all familiar with the difficulties encountered in making diagnosis of the lesions of the right upper quadrant. Even after the most painstaking examination with laboratory and X-ray help, we cannot account for the various symptoms the patient complains of. Particularly in cases of dyspepsia, fullness in abdomen after meals, bad taste in the mouth, particularly in the morning, or in cases of biliousness, or dull aches in back or side or in cases of sick headache we exhaust all our resources to ascertain the cause of symptoms but the examination with all the data secured from the laboratory does not help us materially.

Or take the group of cases which have been operated upon and had the gall bladder removed or drained. Quite a number of patients have a return of the symptoms they complained of prior to the operation. We all realize that upper right quadrant surgery is most difficult zone for the surgeon to work in. It requires experience, excellent technique and sound surgical judgment, and even then about 10 per cent have a return of symptoms in the hands of the very best operators.

Granted that we have a patient complaining of the above mentioned symptoms and that we are suspecting a lesion in the gall bladder, how can we secure information that his biliary tract is diseased? This information can be obtained by the study of the gastro-intestinal tract by means of X-ray, study of gastric juice and duodenal contents; by the use of the various excretory tests and by direct visualization of the gall bladder as described by Graham. All these tests are complicated, some carry an element of danger and none of them are within the reach of the average physician. The expense incident to the carrying out of some of these procedures should be mentioned. In the biliary drainage, however, we have a method that is simple, the apparatus inexpensive, and the test can be carried out by every doctor who can pass a stomach tube.

The technique of the procedure is as follows: The patient reports in the morning on an empty stomach. The Rehfuss tube is passed to the first mark and the stomach contents siphoned out. The amount of gastric juice is noted as well as the presence or absence of bile. The stomach is irrigated with warm water or weak solution of permanganate of potash. When the solution returns clear, the patient is instructed to lie down on his right side, with his right knee drawn up and left knee on the right with the head somewhat bent. The tube is then swallowed a little at a time until the midpoint between the second and the last notch is reached. For the first time I usually supervise the swallowing of the tube as the patient will unconsciously swallow too fast. When the tube passes the stomach the secretion becomes more mucoid and viscid and finally will be bile tinged. After a while the bile becomes free from mucus, and it is known as "A" bile, and is supposed to come from the common duct. The bile which is more concentrated and darker in color which follows later is known as "B" bile and is supposed to come from the gall bladder. After the "B" bile has run out, the character of bile changes to a light watery lemon color and this segment is known as "C" bile, or "liver bile." When no more bile flows the duodenum is flushed out with permanganate and the tube withdrawn. Ordinarily there should be no difficulty in passing the tube into the duodenum, but to the beginner I would advise that he instruct his patient to take a teaspoonful of tincture of belladonna

half hour before having the tube passed. I did this in my first half dozen of cases. Since then I have discontinued its use.

In most of the cases no douching of the duodenum is required. In some, however, the injection of one to two ounces of 33 per cent solution of magnesium sulphate is necessary to initiate the flow of bile. When a large amount of thick mucus is present in the bile, it will be necessary to inject hot water or glycerine solution to prevent holes in the sinker of the tube from being plugged with the mucus. The use of the aspirating bulb to distend the duodenum is resorted to frequently or the Potain aspirator can be used. The whole procedure takes about three hours. The gastric juice is examined for acidity, occult blood or for any other abnormality. The bile is inspected for the presence of mucus and then examined for the presence of epithelial cells or for pus cells or for parasites. The use of the electric centrifuge is of great help in securing the sediment for examination.

Normal bile is free from any large amount of mucus and is free from pus as well as epithelial cells in large numbers. My experience with this method has been very satisfactory. Most patients have returned stating that they felt better, that they were relieved of their symptoms and were anxious to take the treatment to obtain relief.

In cases of long standing with very much mucus, debris and pus, my method is to give the treatment once daily for about ten days, then every other day for about ten days and after that once a week or once a month. Many patients return for treatment as soon as they feel their symptoms returning. Some administer the treatment themselves.

The interesting finding in these cases of chronic gall bladder cases is the presence of anacidity or subacidity in the fasting stomach contents. Out of the 27 cases only two had a normal acidity or slight hyperacidity. The same holds good for the amount of free HCL.

The most marked improvement occurred in a patient, aged 54, who has been for years a chronic sufferer from headache. These headaches would occur usually in the morning, continue all forenoon and were associated with nausea. He could not attend to his business, that of an attorney. He was examined by various men and pronounced to be one of the so-called migrainous individuals, and was given drugs to control or palliate the attacks. The physical examination including X-ray and Wasserman were negative. The diagnosis of migraine was made by me and I told him about the biliary drainage being used in such cases. After the first drainage he experienced relief for over two weeks and felt like he did when he was a little boy. His nervousness and tremor were gone, and his stomach was strong enough to eat nails, to quote his expression.

Besides the use of the medical biliary drainage in chronic cases of gall bladder disease I used it with very gratifying results in one case of catarrhal jaundice in a young girl who had a persistent attack of jaundice following grippe. All the usual medication and diet did not help to clear up the jaundice. One treatment caused the jaundice to subside and it was gone in less than a week.

In cases in which no bile can be obtained it usually means that the bile ducts are blocked by stone, and it is useless to expect any benefit in such cases. In one of my cases I brought on an attack of colic which was followed by cholangitis. At operation a stone was found in the common duct.

Naturally this method should be used in properly selected cases. Some cases giving history of repeated cholangitis should be treated surgically. Cholelithiasis with history of repeated attacks should be turned over to the surgeon. Cases in which malignancy of gall bladder or of the ducts is suspected should be explored surgically. In the properly selected cases the results are very satisfactory. To what are the results ascribed? (1) To the removal of toxic material; (2) to promoting the flow of bile; (3) to flushing of the liver; (4) to relief of stasis by catharsis; (5) to acting as a temporary drain to the biliary system.

To expect that the medical biliary drainage will dissolve gall stones, or adhesions, appendicitis or malignancy is ridiculous. The biliary treatment should be combined with other methods of treatment, such as small

feedings, reduction in the amount of animal protein ingested, cathartics, colonic irrigations and the removal or treatment of the various foci of infection present.

From what I have said I believe that medical biliary drainage is a valuable therapeutic agent and is indicated: (1) in cholecystectomized patients who have a return of symptoms; (2) in catarrhal jaundice; (3) in biliary headaches, sick headache, and cyclic vomiting; (4) in cases where surgery is contraindicated, such as in old people with bad heart, kidneys and blood vessels and in diabetes; (5) as a preoperative and as a postoperative measure; (6) in chronic gall bladder disease; (7) in chronic pancreatitis; (8) in cases of dyspepsia or nervous indigestion, when no cause is found; (9) in certain forms of asthma; (10) in chronic forms of arthritis in combination with other methods of treatment.

DISCUSSION

By DR. H. L. ROBERTSON:

While not an unbeliever in the efficacy of Epsom salts properly administered I am a skeptic as to the claims of the so-called Meltzer Lyon method of non-surgical drainage of the gall bladder as a certain measure or diagnostic aid. This assumes that on introduction of Mag. Sulph. directly into the duodenum by means of a tube the sphincter of Oddi is relaxed, the gall bladder contracts facilitating sudden and profuse drainage from the gall tract.

Let us consider for a minute what the research men are finding. Quoting from a collaborated article of Crohn, Reiss and Morris, on a series of sixty cases reported in the *Journal A. M. A.*, in which the Meltzer Lyon method was used:

(1) The flow of bile was not continuous, not interrupted or rhythmic and no use of the sphincteric muscle was noted.

(2) No amount of Mag. Sulph. caused any expulsion of the gall bladder content.

(3) After the lavage, the flow of bile was more profuse and darker in both pathologic and non-pathologic cases. This change occurred in one patient in whom the gall bladder had been removed.

From a similar study reported in the *American Journal of Medicine*, it is doubtful if there is any specific effect of relaxation of the sphincter of Oddi or contraction of the gall bladder by a 25 per cent solution of Mag. Sulph. (2) The deeper color of "B" bile is due to oxidation and not concentration of bile. (3) Cholectomized patients show "B" bile after operation. (4) The presence of inflammatory debris in the aspirated fluid does not warrant the deduction that bile comes from the gall bladder. (5) It is improper to assume bile stasis by increased Sp. Gr. by the Meltzer Lyon method. The increase is due to resorption of Mag. Sulph.

These and other findings convinced me of the futility of expecting much diagnostic evidence from bile aspirated by this method.

I doubt very much if there is ever a cholecystitis *per. se.* we are dealing with a lymph borne infection in the majority of cases with involvement of liver parenchyma and the walls of the gall tract.

Any treatment which facilitates drainage no doubt gives temporary relief. But why not use less cumbersome methods than the Lyon method of introducing an irritant into the duodenum. When the infection has been of long standing, surgical intervention gives more hope of permanent relief before irreparable damage has been done by delay.

Sometime ago I relegated my Lyon tubes to the junk drawer and feel I am getting just as good results without them.

By DR. BARKSDALE:

I am not so destructive in my criticism as Dr. Robertson for I still regard Epsom salts as a valuable drug. Biliary drainage has suffered the fate of a great many methods that have come into vogue. The over-zealous have made such extravagant claims in its behalf that disappointments have necessarily followed. It has never seemed entirely rational that the solution poured into the first part of the duodenum had any great advantage over the older procedure of giving the concentrated solution on an empty stomach. However in all fairness I must admit that I have seen several cases derive benefit from the Lyon-Meltzer technique. Recently I have used with marked success a so-called non-

tube technique described about three years past in the *Therepeutic Gazette*. The rationale of its use is good and so far as I can see its value closely approximates the tube technique. It is certainly to be tried in the very nervous, and in those too poor or too indifferent to pay for treatment by the tube method.

DR. MENDLEOFF, closing discussion:

Like all new methods that are introduced in medicine there has been too much optimism on one side and too much skepticism on the other. The middle ground is the safest one to follow. To those who have used this method diligently in cases of vague gastro-intestinal conditions it has proven a great help. Whether "A" bile comes from the common bile duct, "B" from the gall bladder, and "C" from the liver is not very important. There are sufficient proofs to affirm the correctness of it. What is important to know is, Does it help the patient in overcoming his symptoms? I believe that in properly selected cases it does. When the patient returns time and again for the treatment and states that he has been free from the symptoms he complained of, there must be something in the treatment other than the purely psychic effect which has helped him. What is it that helped him? It is the drainage, the relief from toxic material accumulated as a result of the infection and secondary hepatic insufficiency. This has been shown by the diminution in the size of the liver, the relief of the jaundice, by the improvement in the digestion and gain in weight and strength.

Naturally you cannot expect the method to cure all cases of gall bladder disease. A good many should be turned over to the surgeon at once, some after preliminary medical drainage. The patient with the bad heart, kidneys, and diseased blood vessels should be treated medically, others should be turned over to the surgeon after medical drainage. The jaundiced patient with the high operative mortality should be treated medically before being operated on. The cooperation between the surgeon and the internist is necessary to obtain the best results.

Gentlemen, I thank you very kindly for having listened to the paper and for the discussion.

CHRONIC CONSTIPATION *

By K. M. JARRELL, M. D.
Beckley, W. Va.

THE MOST DANGEROUS disease that afflicts humanity today is not small-pox, nor pneumonia, nor typhoid, nor even tuberculosis which levies a heavy toll upon our citizens. It is common constipation, which is not so much a disease in itself as a cause of numerous other diseases.

Constipation heads the list of offending conditions that so lowers the body resistance to germs or toxins, that dangerous and even fatal disorders are enabled to gain lodgment and find already prepared a fertile field of development. I believe that if the average human being had one or two evacuations of the bowel daily, at least 60 per cent of the medical profession would have to give up practice and seek other fields of labor. With the exceptions of the obstetricians, surgeons, eye, ear, nose and throat men, or other specialists, there would be little need for the old family doctor.

The absorption of poisons and toxins generated from retained feces in the intestines is the direct cause of many irritable conditions; headaches, neuralgias, and some forms of neuritis, also a large and aggravating number of nervous conditions including insomnia, melancholia, unrefreshing sleep, heart irregularities and many other conditions.

* Read before the Raleigh County Medical Society, Beckley, W. Va., February 18, 1926.

The latest theory concerning epilepsy is that many times it is caused by auto intoxication. In any event the best authorities say that the correction of the condition of putrefaction in the intestines has cleared up a number of cases of epilepsy of months or even years standing.

Constipation may be rightly considered as only one segment of a cycle that so lowers body tone that the very causes that depress the functions tend to continue the first cause. The peristalsis, or worm-like motions of the bowel, by which the refuse material of digestion is passed along into the colon or lower bowel—is inhibited because of the insufficient muscular tone of the intestinal wall. The bowel gradually fails to respond to the irritating presence of its contents, and it becomes more and more atonic and the outcome is that nothing but the most drastic cathartics will remove its contents.

While this mass is lying there drying out as it were, and covering the surface of the intestinal canal, the surfaces that should be clean for absorption of food products, are generating putrefactive alkaloids, such organic poisons as indol, skatol, and many others powerful and toxic, are absorbed into the circulation once more to depress the normal functions and to help continue to aggravate the cause that started them.

Chronic constipation is now recognized as one of the chief causes of anemia. This results from the general depression of the metabolic and assimilative processes.

Physicians now instead of depending so largely upon tonics of various kinds are giving more of their attention to the broad principles of "cleaning up" and keeping clean —realizing that if the system is put into a condition to take care of itself, many times it will do it and do it well.

Another fact of general importance to humanity, especially that large portion of humanity which digs its grave with its teeth; is that many cases of kidney disease characterized by large amounts of low specific gravity urine containing albumin and waxy casts are due to intestinal putrefaction. The bowel by shifting a considerable portion of its work of elimination upon the kidneys, overworks these organs and the nephritis which develops is merely an expression of resentment on the part of the kidneys against this over work. The successful treatment of these conditions does not depend so much upon the action of the kidneys and whipping them to their duty, as it does upon seeing that the bowels do their fair share of the task of eliminating the poisons which accumulate in them.

Also many of the diseases that effect the liver develop because that over-worked organ has an extra burden of filtering out from the blood, and neutralizing the poisons which should never have been permitted to enter.

Constipation often produces chronic diarrhea, notwithstanding repeated evacuations. There is with some patients a gradual accumulation of hardened excremental matter on the walls of the intestines. While nature is doing her best to dislodge and eliminate this, she requires help in some form, and we give a full dose of castor oil which not only relieves the diarrhea but also corrects the constipation. Diarrhea in this case is a resentment on part of the bowel alone.

Causes: There are many causes of constipation, some of these are obstruction, adhesions, prolapse of the bowel, hernia, etc., which as a rule require surgical attention. But the most frequent causes of constipation are constriction of the abdominal muscles from snug lacing, neglect to answer the calls of nature, or carelessness in establishing the habit of evacuation, and this part of the body becomes indolent. Modesty on the part of females in attending to the wants of nature thereby bringing on a sluggish condition of the intestinal canal is a common cause in that sex. Eating too much concentrated food and not drinking sufficient water to flush out the system and occasionally water containing large quantities of lime salts may produce costiveness. In other instances constipation seems to be hereditary, and to depend upon deficient nerve supply or muscular tone and lack of secretion in the lower bowel, or upon hepatic torpor. An insufficient flow of bile is another important cause of constipation, as the bile seems to set in motion the peris-

taltic wave, the result of which will be evacuation.

Infants are especially liable to constipation — particularly bottle fed infants — as there is lack of fats in the food as a rule. This condition is overcome to a great extent by adding a teaspoonful of milk of magnesia to a few ounces of water to be used in the milk mixture. Milk diet is rather constipating at best, either for infants or adults, as it leaves after digestion so little residual matter for the intestines to work on.

Treatment: Treatment depends to a great extent upon the cause. The cause should be sought and if possible removed, and the physician should not be content just to order purgatives which only give temporary relief. Any and all measures which restore nervous and physical vigor are effective remedies against constipation.

Diet is of particular importance. All fruits except strawberries, raspberries and blackberries are beneficial and are effective peristaltic stimulants.

Fruits act in two ways—they contain either residual materials or sufficient vegetable acids to be laxative. Apples, oranges, figs and prunes are very effective.

Diet as a rule should be light, and to a great extent should consist of foods that give some bulk which would cause peristalsis.

In the vegetable line we might mention lettuce, celery, radishes, turnips, rhubarb, tomatoes, asparagus, kale, mustard greens, etc. Instead of wheat bread—use oat meal, whole wheat, rye or brown bread. Any kind of soups may be given, but they should not be thickened with flour. Bacon, fat meat and gravies are better than lean roasts, steaks or chops. Eggs poached, soft boiled or raw are better than fried eggs. Buttermilk should be used instead of skimmed milk. Corn, green or canned, is of service. Corn bread is also much to be desired. Coffee, strong tea, cocoa, chocolate, and all starchy foods should be avoided.

Mechanical treatment is also beneficial, such as massage of the abdomen, horseback riding, swimming, Swedish movements, and any form of gymnastics. Walking is also very important and beneficial.

Medical treatment is next in line and will have to be used in a great number of cases, but here we should use a great deal of care in selecting our remedies for each individual case. In cases of hepatic torpor a dose of calomel may often be beneficial, as it will start the flow of bile, which in turn acts as a peristaltic stimulant. Mineral oil has a wide field of usefulness, especially when fecal matter is dry and moved with difficulty, or where there is bowel irritation or intestinal spasm. Tablespoonful doses of milk of magnesia followed by the juice of an orange or lemon is very beneficial, especially if taken in the morning before breakfast.

Many of the mineral waters such as Hunyadi, Carlsbad, etc., are of service if used in sufficient quantities. Cold soft water taken before breakfast and at bedtime and at frequent intervals during the day is ideal.

Nux-vomica acts as a bitter tonic and stimulant, and prevents atony of the mucous membrane as well as increases the reflex action and consequently improves peristalsis. Belladonna also aids peristalsis by depressing the inhibitory fibres of the splanchnic nerves and allaying spasm.

In obstinate constipation we are sometimes forced to resort to compound cathartic pills, or some modified form, to empty the bowels and then regulate with some mild laxative, such as carcara, Lapactic pills, Hinkle's cascara pills or any mild laxative, and by prescribing proper diet. Cascara Sagrada is the ideal laxative, if we have an ideal, and should be used if we have to resort to a laxative to be used continuously.

We are all too familiar with the results of many of the purgative drugs, as they produce griping and over peristalsis and the end result is—we have constipation to follow. The daily use of the purgative salts are harmful as they rapidly lose their power. They also produce a large watery stool and remove fluid from the bowel, which should remain there. They often produce anemia when constantly used by robbing the blood of its salts and fluid. Rhubarb is a laxative, but later acts as an astringent, and therefore, is constipating afterwards. Castor oil if used continuously is notorious for its tendency to cause constipation ultimately. Enemas, and glycerine and soap suppositories

are effective only as temporary measures. If too long continued they tend to form a habit of bowel atony.

We should insist on our patients going to stool at definite intervals, and form a habit of going to stool regularly. Any method which tries to get at the cause is good, even a poor method is better than none. There is no method of treating constipation quite so disastrous—so life shortening or disease producing as to utterly ignore it.

We all so often see cases of pelvic congestion in females brought about by chronic constipation, and we see them greatly relieved by relieving the constipated condition of the patient.

The physician should bear in mind that defecation is a normal physiological act which must be continued all through life, and it is almost as foolish to stimulate the bowel continuously to peristalsis as to perpetually employ heart stimulants or respiratory excitants.

Editor's note: We question the correctness of the author's idea of physiological action of calomel.

ARTIFICIAL NOSE — CASE REPORT

By CHARLES H. CLOVIS, M. D.
and
EDWARD C. ARMBRECHT, D. D. S.
Both of Wheeling, W. Va.

MR. J. R., age 71, presented himself on November 24, 1925, for examination and treatment. His plight was one that called for drastic treatment in order to make the best of a condition that had been terribly bungled.

On removal of a soiled dressing, the nasal, right malar, and the anterior portion of the superior maxilla along with a portion of the septum of the nose, presented themselves as necrotic bone; much pus and mucus flowed from beneath the sequestra. With some difficulty, these sequestra were removed and the nose looked somewhat like the accompanying photograph except a few actively malignant areas, along the skin margin, were present. These were treated over a period of three months with X-ray and the result is apparently good.

The history of this case, as recited by the

patient, is so like many other skin cancer cases that it is worth repeating. This patient first presented himself to a reputable radiologist, four years ago, who diagnosed and treated a small epithelioma. The patient stopped treatment as soon as the growth disappeared but before he was discharged. When the cancer reappeared, he went to another reputable man and the same thing occurred.

When the cancer reappeared a third time, he went to a middle west "Cancer Institute" and had a paste used with complete destruction of the nose as well as some of the important bones of the face.

After the destructive processes were over, we succeeded in getting the area apparently free of malignancy and turned him over to the dental department for reconstructive, cosmetic work.

The reconstruction procedure was as follows: Metal spectacle frame was procured and fitted, allowing sufficient space for the material which was to build and contour the bridge of the artificial nose.

A large piece of cardboard obtained, an outline of the patient's head was made upon it. This tracing was then cut out permitting the cardboard to be placed over patient's head, resting on top and just anterior to the ears on either side. This prevented Plaster of Paris from flowing to any extent, thereby keeping bulk intact until such a time necessary for it to set.

After filling nostrils with vaseline covered cotton and using moistened rice paper to cover eyebrows and mustache, the impression was taken with Plaster of Paris. Stone was used to pour the model, to insure a durable as well as a detailed surface to work upon. The contour of the nose was greatly aided by a photograph of the patient taken previous to the occurrence of this deformity. The nose was then built up in wax and heating the bridge of the spectacle frame, each was placed insitu allowing wax to get hard and permitting the frame to be removed with the wax nose attached thereto.

Two small prongs protruding from the posterior surface and taking their seat on each side of the septum, when the artificial nose is in position, thus preventing any lateral movement, while the spectacle frame prevents any anterior movement. Two openings were placed in the artificial nose, permitting the patient to breathe with ease.

The usual procedure of investing and packing (white rubber) were carried out. The vulcanization process was carefully watched to prevent any undue brittleness from occurring in the finished product. The following table was used:

One hour up to 280° F.
One hour at 280° F.
One hour up to 320° F.

The case was trimmed and fitted to the patient's face, the eyes were examined and the proper lens prescribed, which were placed in the frames to which the artificial nose is attached.

The artificial nose was painted to match the color of the patient's skin. So well was this accomplished that one must be within a few feet of the patient to detect any variation of detail.

The accompanying photographs show the gross improvement in the patient's general appearance and expression. He is well pleased and walks about town without attracting undue attention. It is gratifying to report a decided improvement in the patient's mental attitude as well as in his personal appearance.

We are indebted to Dr. H. F. Spillers, superintendent Ohio Valley General hospital; Dr. Mathew Zubak, eye, ear, nose and throat department; Mr. George Kossuth, artist and photographer; and the Wheeling Rotary Club for their cooperation in making this work possible.

THE CAUSE OF CICATRICAL CONTRACTION *

By J. SHELTON HORSLEY, M. D.
Richmond, Va.

IN surgical literature there has occurred the statement that defects in the common bile duct or the ureter would be satisfactorily repaired if the epithelium would cover the defect, and treatment along this line has been instituted. Most strictures, however, have an epithelial covering. Contractions of the neck following burns have a practically normal epidermis. A histologic study of the epidermis and of the connective tissue in cicatricial contractions of the neck, and of the connective tissue in scirrhous cancer of the breast, in malignant stricture of the bowel and in cirrhosis of the liver, was made. There appears to be no essential difference from a histologic standpoint between contracting scar tissue and non-contraction scar tissue. Indeed, both of these resemble very closely normal connective tissue as found in the corium and elsewhere.

The origin of connective tissue and of scar tissue is discussed. Baitsell's researches seem to show that connective tissue in the chick embryo and the amphibian originates from a transparent cell-free ground-substance which later becomes fibrillated. H. E. Jordan, of the University of Virginia, thinks that the fibroblasts which develop in the scar tissue from granulation tissue come chiefly from lymphocytes but to some extent from fixed connective tissue cells and from endothelial cells.

Scar tissue, a type of connective tissue, is a lowly tissue, and requires less nutrition than the more highly differentiated tissues. Consequently, when nutrition is too poor to sustain highly differentiated cells, connective tissue may dominate.

The following classification is given for the causes of cicatricial contraction:

1. *Direct causes of cicatricial contraction: Toxic products produced by,*
   a. Burns (by heat, light or electricity).
   b. Chemicals.
   c. Bacteria.
   d. Cancer.
   e. Trauma and cells affected by lack of blood supply.
   f. X-ray or radium.
2. *Indirect Causes:*
   a. The general disposition of the individual toward scar tissue formation.
   b. The portion of the body affected.
   c. The absence of strain or tension on the scar.
   d. Lack of proper blood supply.
   e. The absence of natural resistance toward physiologic secretions or excretions.
   f. The quantity of scar tissue.

Each of these causes is discussed. The conclusions are as follows:

1. Cicatrical contraction is due to scar tissue, and covering the surface of a wound with epithelium alone does not prevent contraction except so far as it prevents infection or unnecessary trauma to a raw surface.

2. The cicatrical contraction following X-ray or radium burns differs from other scars, in that the deeply penetrating rays cause an over growth of vascular endothelium which partially or completely obliterates the blood vessels and makes a greater degree of ischemia.

3. There is a biologic resistance possessed by tissues of the body to the normal secretions or excretions of their environment, so that in transplanting tissue this must be taken into consideration.

4. Certain regions of the body, possibly because of some inherent quality or possibly because of mechanical conditions which retard complete extension, are more prone to scar tissue contraction than other regions.

5. As scar tissue is a lowly tissue that can survive on less nutrition and under harder conditions than more highly differentiated tissues, it seems essential in avoiding cicatrical contraction not only to prevent the irritating effects of frequent injuries or of toxic substances, but to provide a blood supply so that the higher tissues may survive and not be overwhelmed by scar tissue.

* Abstract of paper read before the American Surgical Association, Detroit, May 24, 1926.

THE WEST VIRGINIA MEDICAL JOURNAL

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS

J. HOWARD ANDERSON, Marytown — WALTER E. VEST, Huntington — CHARLES W. WADDELL, Fairmont — HARRY M. HALL, Wheeling

THE JOURNAL issued on the first of each month. Entered as second-class matter, January 1, 1926. Acceptants for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Authorized July 24, 1919.

Subscription to Members ..... $2.00 Per Year
Subscription to Non-Members ..... $3.50 Per Year
Single Copies ..... 35 Cents

OFFICERS

President:
J. R. BLOSS ..... Huntington
President-elect:
CHESTER R. OGDEN ..... Clarksburg
First Vice-President:
R. O. ROGERS ..... Bluefield
Second Vice-President:
H. C. SKAGGS ..... Montgomery
Third Vice-President:
D. A. MACGREGOR ..... Wheeling
Treasurer:
HUGH G. NICHOLSON ..... Charleston
Executive Secretary:
MR. STERRETT O. NEALE ..... Charleston
Delegate to A. M. A., 1926:
J. R. BLOSS ..... Huntington
C. R. OGDEN, *Alternate* ..... Clarksburg
Delegate to A. M. A., 1926-27:
H. P. LINSZ ..... Wheeling
R. A. ASHWORTH, *Alternate* ..... Moundsville

COUNCILORS

First District:
H. P. LINSZ, (1-year term) ..... Wheeling
C. G. MORGAN, (2-year term) ..... Moundsville
Second District:
C. H. MAXWELL, (1-year term) ..... Morgantown
C. H. HALL, (2-year term), ... Elkins
Third District:
JOHN FOLK, (1-year term) ..... Bridgeport
C. R. OGDEN, (2-year term) ..... Clarksburg
Fourth District:
J. E. RADER, (1-year term) ..... Huntington
W. E. VEST, (2-year term) ..... Huntington
Fifth District:
J. H. ANDERSON, (1-year term) ..... Marytown
H. G. STEELE, (2-year term) ..... Bluefield
Sixth District:
R. H. DUNN, (1-year term) ..... South Charleston
C. A. RAY, (2-year term) ..... Charleston

¶ All original articles for THE JOURNAL must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

¶ Our readers are requested to send marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

¶ It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

¶ Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

¶ Advertising forms will go to press not later than the tenth of each month. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

¶ Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, 303 Professional Building, Charleston, W. Va.

STANDING COMMITTEES

Medical Defense Committee

H. P. Linsz, Wheeling; C. R. Ogden, Clarksburg; C. G. Morgan, Moundsville.

Committee on Scientific Work

G. H. Barksdale, Charleston; O. D. Barker, Parkersburg; D. A. MacGregor, Wheeling, Scientific Secretary.

Public Policy and Legislative Committee

C. A. Ray, Charleston; G. A. MacQueen, Charleston; R. H. Walker, Charleston; James McClung, Richwood; J. R. Bloss, Huntington; D. A. MacGregor, Wheeling.

Committee on Hospitals

Robert J. Reed, Wheeling; B. H. Swint, Charleston; R. J. Wilkinson, Huntington.

Committee on Professional Relations

J. R. Shultz, Charleston, chairman, (3-year term); H. G. Nicholson, Charleston, (1-year term); H. R. Johnson, Fairmont, (2-year term); A. G. Rutherford, Welch, (4-year term); W. R. Goff, Parkersburg, (5-year term).

Surgical Section

E. Bennette Henson, Charleston, chairman; W. R. Goff, Parkersburg, secretary.

Eye, Ear, Nose and Throat Section

T. W. Moore, Huntington, chairman; R. A. Tomassene, Wheeling, secretary.

Woman's Auxiliary Officers

President, Mrs. A. G. Rutherford, Welch; *First Vice President*, Mrs. W. H. St. Clair, Bluefield; *Second Vice President*, Mrs. J. P. Lilly, Morgantown; *Secretary*, Mrs. C. M. Scott, Bluefield; *Treasurer*, Mrs. C. A. Ray, Charleston.

EDITORIAL

AN ASSOCIATION HOME

The recommendation of President Bloss in his address at Morgantown in reference to a future home for the association is an idea which should appeal to every physician in West Virginia whether or not he be a member of the association.

The House of Delegates very wisely empowered Dr. Bloss to appoint a committee of five members to make investigations, suggest plans, etc., and report to the annual meeting in 1927. We are confident that within a short time this committee will be named and will be composed of men who are familiar with business propositions of this nature.

We may be years in reaching the goal but if we work and help the committee we can do anything we start to do. Let us talk and scheme "Home for the Association," as we did for an executive secretary and watch for results. —C. A. R.

SUPRA-VAGINAL HYSTERECTOMY

Supra-vaginal hysterectomy is the operation in which the body of the uterus is removed for various reasons and the cervix left in situ.

That this surgical procedure is misnamed is shown by the fact that the total abdominal hysterectomy is also done supra-vaginally, while both operations however differ greatly. Gynecologists have therefore cast the name subtotal for supra-vaginal hysterectomy. Subtotal hysterectomy for whatever indications it is performed is for me and should be for every surgeon, working in this particular field, *a thing of the past.* The rather frequent observation of malignancy of the cervix after subtotal hysterectomy has convinced me that it should be an *obsolete* surgical measure.

I have seen a relative large number of multiparous women with uterine fibroids, in which the cervix was not removed with the tumorous uterus at the same time, coming back after a shorter or longer time afflicted with *cancer of the remaining cervix.*

A tumor in the human body is not unlike a burglar in the house and I have yet to see a good natured burglar; he may depart but leaves an explosive behind. One multipara came back to me fifteen years after subtotal hysterectomy with cancer of the cervix. So much for this part of gynecology.

Subtotal hysterectomy has been performed for infected tubes and uterus or for relief of extremely profuse and offensive vaginal discharge. The persistance and abundance of this vaginal discharge has brought some of these patients to my care and could not be cured until I removed the vaginal stump per vaginum which, by the way, is a very delicate and difficult undertaking, especially when the abdominal end of the cervix is approached.

A total abdominal hysterectomy will in all cases prevent these obnoxious sequela and *is no more difficult* and *dangerous* than a subtotal removal of the uterus.

G. ACKERMANN, M. D.

[NOTE: Dr. Ackermann was among the first to do a hysterectomy in Wheeling and in the front ranks of those doing it in the United States. In the first operations long pins were used. He could easily write a history of Hysterectomy.]

TITLE OF "DOCTOR"

Few of the political leaders of this country are so highly and universally esteemed as of preeminent qualifications for their high position as is actually the Governor of New York.

His opinion on all matters directly affecting the welfare of our people is widely awaited and most generally endorsed.

Let us repeat what such authority and a *real Governor* has to say about the Medical Practice Act of his state, and to our shame compare this statement with what is the attitude of the Governor and ruling politicians of the state of West Virginia.

When signing the present act, Governor Smith made a special announcement of its

intent and purpose, and why he so fully endorsed it, saying among other things:

"I regard it as highly important that the ignorant and the unthinking be not misguided by the use of the title 'Doctor' because it presupposes in the minds of a great many people a knowledge of the human anatomy sufficient to enable the holder of such a title to diagnose and prescribe for all the ills the human body is heir to. The title 'Doctor' should be made by law to mean what the great majority of people believe it means, and it should not be promiscuously bestowed upon individuals so lacking in proper qualifications as to be unable to tell the difference between indigestion and hydrophobia."

The intellectuality and good taste of Europeans is such that no person except the Doctor (of Medicine) ever permits or wishes to use that title. It would be well if our intellectuals—professors, preachers, as well as more or less quacks, would see the good taste at least of avoiding imputation of passing as "Doctors" where, as Governor Smith says, the great majority of the people understand that title to apply only to the medical profession. —W. S. M.

REPORTS FROM COMPONENT SOCIETIES

Ohio County

Now that the crowd has returned from their state meeting at Morgantown it is interesting to report the reaction. It is generally conceded that it was a very good meeting. That it was well taken care of, especially in regard to getting through with the program. Notwithstanding delays and rather extensive discussions not on the time allotted, the President preserved a very good order of presentation. It takes some little courage to rap in on a good speaker but it is nevertheless right and was well received. Comparing it with Bluefield we find them equally good as to programs. That Bluefield still holds its place as providing the highest grade vaudeville performance ever put on anywhere by anybody (theatrical profession included). We believe the mark set down there will never be surpassed. We believe the speakers at the banquet at Morgantown did not do Morgantown, their Society or themselves a great deal of credit. This is nobody's fault because no one can foretell what the psychology of a crowd is going to be. There have been times when nothing but four serious subjects would have done. Most banquets do carry serious discussion as can be seen by consulting any big New York or Washington banquet program. But where there are young people and a dance ahead we doubt if any program committee can build up a "sure fire" program. But on the social side particularly in the entertainment of the women it must be said Morgantown was all that could be desired and the reaction to their efforts here was generous praise indeed. Perhaps being a university town they can be said to be adept at this sort of entertaining. It may be. Anyway everyone can learn how to do it from them. It was well managed—all of it. There was a get up and go about it which was refreshing. Politics appeared as usual but were better hidden. There were little things came out that could have marred the good feeling. It reflects a good deal of honor, common sense, and high feeling on the whole state society to recall that nothing was allowed to mar a fine session.

The staff of the Wheeling Clinic was there in full force, and we hazard the belief it was because all believed it was worth while for them to be there. That from some standpoint scientific, political or social it was the thing for them to do, and from their attendance a lesson worth while to the whole profession is to be learned. We know the chief, Dr. Fulton, does a large amount of work. We know a lot of it is from out of town. We know a lot of it required his own or one of his chief associates presence at the Clinic

more than the average surgeon or physician. If he considers a meeting of the State Society worth while enough to contract his volume at home and come over with most of his colleagues, why is it so many other men let most anything else interfere with their attendance? They can hardly have more at stake than he nor can they have any other excuse worth while outside of some severe case that might possibly require personal attention. This could not happen often. A good bit of ill feeling is often directed towards the way some one or another individual annexes things in this world. Well "compensation" is probably the answer. If we don't put anything into something, we don't get anything out. Quite old and trite but still probably working as usual.

Wheeling certainly sent its share of doctors over to the meeting. We would say one-third of its membership appeared at sometime or other.

We were proud to have Dr. Wingerter as toastmaster. He and his charming wife represented this city as "Ambassadors of our Good Wishes" in a regal manner. We want Morgantown to remember they helped all of us by going there on their honeymoon. Believe us, they chose one wonderful spot and one hardly to be surpassed anywhere on the continent for true lovers. To the easy come and easy go, we recommend Atlantic City or Niagara Falls. To those who like to reflect and commune and are sufficient unto themselves there is but one brooding, lovely, romantic spot—that is Mount Chateau.

Rumor has it that Dr. Sherman mentioned before as combining the healing art with religion from the Episcopalian standpoint will return to us and teach a class. This class must be at least sixty—the story goeth.

Dr. A. J. Noome sends us a clipping from the *Saturday Evening Post* of May 22, 1926. We had this clipping before us at the table the night of the banquet and neglected to pick it up and use it—also our watch—both of which have disappeared from us. It is called Help for Doctors, and should be read by every doctor in the state.

The following although a minor news note of little importance may be of service from an anatomical point of view. This reporter made three futile assaults on the waiter at the Hotel Morgan to ascertain what "Lamb Fries with Tomato Sauce" were. That he stayed two more days in Morgantown after such an exhibition of gross ignorance reflects on his intelligence and good taste.

Dr. Ivan Fawcett and family have gone to the East and will attend the celebration at Philadelphia.

Dr. Charles Keesor has left for the Presbyterian assembly in which he usually takes a prominent part.

Dr. Charles Clovis was unable to be present at the session at Morgantown on account of the opening of a gas field in which he is interested. This was a matter of great regret to his Wheeling associates who are rather proud of his papers wherever read.

H.M.H.

Greenbrier Valley

A most excellent meeting of this society was conducted June 15 in Harts hotel at White Sulphur Springs with a good attendance. The principal paper was read by Dr. J. M. Emmett of Clifton Forge, Va., on the subject, "The Indications and Use of Radium in Pelvic Diseases," Doctors R. H. McClung of Alderson and S. G. Love of Ronceverte opened the discussion. The reception committee in charge of arrangements included Doctors Wyatt and Myles of White Sulphur.

C. F. MAHOOD, *Secretary.*

Academy of Medicine

The Academy of Medicine of Parkersburg met in special session Wednesday, June 16, for reports of delegates who attended the state meeting at Morgantown. All were pleased with the reports.

Members present gave Dr. B. O. Robinson a rising vote of thanks for the picnic at Borland Springs June 3 when 56 members participated.

The society's new constitution and by-laws have been printed in pamphlet form and distributed to the membership. The purposes of the academy as set forth in Article II relate that they shall be to bring into one or-

ganization the physicians of Calhoun, Jackson, Ritchie, Roane, Wirt and Wood counties "so that by frequent meetings and full and frank interchange of views they may secure such intelligent unity and harmony in every phase of their labor as will elevate and make effectual the opinions of the profession in all scientific, legislative, public health, material and social affairs, to the end that the profession may receive that respect and support within its own ranks and from the community to which its honorable history and achievements entitle it. . . . . "

The academy is in a most flourishing condition and an effort is to be made to enroll every eligible physician within the confines of the counties named. R. H. PADEN, *Secy.*

HOSPITAL NEWS

Ohio Valley—Wheeling

The staff of the Ohio Valley General hospital met on Tuesday, June 8, in the last session of the season. Dr. Scullard, pathologist, gave an illuminating account of tumors affecting the lymphatic system. He dwelt especially on lymphosarcoma, presenting two recent examples in the cases of Reed and Wilson. He spoke of a new committee formed by the American Association of Pathologists to look into this subject and said that some men felt like classifying tuberculosis with these tumors of the lymphatic system.

The remainder of the evening was taken up with a program devised by Drs. A. L. Jones and Howard T. Phillips. Each man was to give an account of his most interesting and leading case in the course of his lifetime practice. It is earnestly commended to other societies as a diversion. It is quite likely that the recital may grow humorous and inclined to levity and it is sure enough that it will not please those ever seeking the ultra scientific but we predict it will prove satisfactory to ninety per cent of those present. Five minutes was the time allotted and no one took advantage of it. The prize recital went to Dr. Joseph Caldwell. Briefly as follows. Woman—pregnant. Full time. Midwife. Labor pains three days. Evident delivery. Could find NO BABY. Called in doctor. None found but large mass appeared in upper abdomen. Sent into Wheeling hospital. Dr. Caldwell saw her. Examined under anaesthetic. After several examinations by vagina, his examining hand brought out a ruptured uterus free from ovaries, tubes, ligaments—in other words a hysterectomy. Not a ligature or instrument of any kind was used by him. Patient in shock. Three days later opened upper abdomen and removed a full term baby. The cord had been automatically severed. Placenta escaping by vagina. Patient made a good recovery although later she had a ventral hernia which she declined to have operated upon because she felt in such good health she elected to put up with that.

Second prize to Dr. Clovis who recited a case he had seen at Columbus where a cyst was opened and contained two complete skeletons including teeth.

Third to Dr. B. F. Harden, visitor from Wellsburg, who told of a man who had had his abdomen cut open inadvertently walking a considerable distance with his intestines in his hands. Reached his office and feeling the goal had been attained—forgot—removed his hands with consequent dropping of the aforesaid valuable organs and promptly went into shock. The wound was hastily sewed up and he responded by getting well.

Many of those present gave very scientific discussions and everybody should have been satisfied. However we are merely guessing ten per cent were not, just to be reasonable. It was a happy enjoyable evening which this reporter greatly enjoyed and it is recommended unreservedly to any society who is "fed up" on the usual order.

The staff of the Wheeling hospital met on Wednesday evening, June 10. Paper by Dr. G. Selbach on Tumors of the Endocrine Glands. We asked Dr. Thoner about the discussion. He replied there wasn't any, as no one ever believed there was so much to it. We ask our colleagues of West Virginia to watch the progress of this pathologist.

TRANSACTIONS

FIFTY-NINTH ANNUAL SESSION WEST VIRGINIA STATE MEDICAL ASSOCIATION

Morgantown, May 25-26-27, 1926

TUESDAY, MAY 25, 1926

The West Virginia State Medical Association met in the hall of the Elks' Home, Morgantown, at nine A. M., and was called to order by the President, Dr. James R. Bloss, of Huntington.

The invocation was said by the Reverend W. E. Lowther, of Morgantown, and addresses of welcome were delivered by Dr. S. S. Wade, of Morgantown, representing the Monongalia County Medical Society, and Mr. W. E. Brooks, City Manager of Morgantown. The response on behalf of the State Association was made by Dr. Walter E. Vest, of Huntington.

On motion of Dr. A. A. Shawkey, of Charleston, seconded by Dr. George D. Johnson, of Huntington, the Association voted to confirm the action of the House of Delegates in instructing the Council to proceed to incorporate the West Virginia State Medical Association.

Scientific Session

The paper of Dr. A. P. Butt, Elkins, and Dr. Guy L. Cromwell, Davis, entitled "Gastrotomy for Food Overdistension," was read by Dr. Butt, and was discussed by Dr. E. Bennette Henson, Charleston, and Dr. Butt in closing.

Dr. J. C. Irons, Dartmoor, read a paper entitled "The County Society Secretary," which was discussed by Dr. C. H. Maxwell, Morgantown; Mr. Sterrett O. Neale, Executive Secretary of the State Association, Charleston; Dr. H. G. Steele, Bluefield; Dr. A. P. Butt, Elkins; Dr. H. A. Walkup, MacDonald; Dr. R. A. Ireland, Charleston; Dr. James R. Bloss, President; Dr. C. A. Ray, Charleston, and by Dr. Irons in closing.

A paper on "The Differential Diagnosis of Angina Pectoris" was read by Dr. Oscar B. Biern, of Huntington, and was discussed by Drs. D. A. MacGregor, Wheeling; A. H. Hoge, Bluefield; Charles O'Grady, Charleston, and H. G. Steele, Bluefield; and by Dr. Biern in closing.

The following papers, constituting a symposium on goitre, were then read:

"Differential Diagnosis (Illustrated)"—Dr. D. M. Aikman, Wheeling.

"Surgical Treatment of Goitre"—Dr. W. R. Goff, Parkersburg.

"The Medical Aspect of Goitre"—Dr. H. L. Robertson, Charleston.

These papers were discussed by Drs. H. G. Steele, Bluefield; Wade H. St. Clair, Bluefield; S. H. D. Wise, Parkersburg, and James R. Bloss, President; and in closing by Drs. Aikman and Goff.

Dr. E. Bennette Henson, Charleston, offered the following:

"Resolved: That the West Virginia State Medical Association, in annual session assembled, condemns the indiscriminate use of iodin in the public schools and among the public generally."

This motion was seconded by Dr. H. G. Steele, Bluefield, and, after discussion by Drs. R. H. Paden, Parkersburg; E. Bennette Henson and John Thames, Kingwood, was put to vote by the President. An aye-and-no vote was indecisive, and a standing vote was then taken, which resulted as follows: 33 for; 40 against. The motion was lost.

Dr. Howard T. Phillips, of Wheeling, read a paper on "X-ray in Skin Affections; Indications and Limitations," which was discussed by Drs. W. M. Sheppe, Wheeling, and S. H. D. Wise, Parkersburg, and Dr. Phillips in closing.

The Association then adjourned until three P. M.

Afternoon Session

The Association convened at three o'clock in the hall of the Elks' Home, and was called to order by the President.

Dr. John Thames, Kingwood, read a paper entitled, "How a Full-Time Health Unit Is Beneficial to the Practice of Medicine," which was discussed by Drs. Walter E. Vest, Huntington; B. S. Rankin, Tunnelton; David Littlejohn, Charleston; L. M. Yost, Fairmont; G. R. Cooper, Troy; C. A. Ray, Charleston; Robert A. Ashworth, Moundsville; R. A. Ireland, Charleston, and C. O. Henry, Fairmont, and by Dr. Thames in closing.

An address on "Periodic Health Examination of the Apparently Healthy," was delivered by Dr. Orrin S. Wightman, of New York City.

After expressing his appreciation to Dr. Wightman for his able address, Dr. W. S. Fulton, Wheeling, moved that the West Virginia State Medical Association go on record as indorsing the periodic health examination. This motion was seconded by Dr. C. L. Holland, Fairmont, and, after discussion by Drs. A. P. Butt, Elkins; M. L. Bonar, Morgantown; Charles O'Grady, Charleston, and Dr. J. H. J. Upham, of Columbus, O., was carried without a dissenting vote.

Dr. G. R. Maxwell, Morgantown, read a paper entitled "Early Pulmonary Tuberculosis," and Dr. Walter C. Swann, Huntington, read a paper on "The X-ray Diagnosis of Pulmonary Tuberculosis." These papers were discussed by Drs. Walter E. Vest, of Huntington; H. G. Wildman, Terra Alta; W. S. Magill, Morgantown; C. H. Hall, Elkins; S. J. Morris, Morgantown; Orrin S. Wightman, New York City; again by Dr. Wildman and Dr. Magill; by Dr. B. I. Golden, Elkins; by Drs. Maxwell and Swann, in closing, and again by Dr. Hall.

The Association then adjourned to meet at eight P. M.

Evening Session

The Association met at eight o'clock in the hall of the Elks' Home, and was called to order by Dr. H. C. Skaggs, the Second Vice-President.

The Annual Address of the President was read by Dr. James R. Bloss, President, and was referred by the Chairman to a committee composed of Drs. A. A. Shawkey, Charleston; T. W. Moore, Huntington, and W. S. Fulton, Wheeling ,for consideration.

Dr. J. H. J. Upham, of Columbus, Ohio, (invited guest), then read the Oration on Medicine.

Dr. Chester R. Ogden, Clarksburg, read the oration on surgery, entitled "The Drama of Surgery in West Virginia."

WEDNESDAY, MAY 26, 1926

Medical Section—Morning Session

The Association met at nine o'clock in the hall of the Elks' Home, and was called to order by the President, Dr. Bloss.

A paper on "The Management of the Severe Diabetic" was read by Dr. William M. Sheppe, Wheeling, and was discussed by Drs. A. H. Hoge, Bluefield; C. A. Ray, Charleston, and J. L. Miller, Thomas, and in closing by Dr. Sheppe.

Dr. T. M. Barber, Charleston, read a paper entitled, "Acidosis in Children: Its Treatment," which was discussed by Drs. C. L. Holland, Fairmont; A. A. Shawkey, Charleston, and J. T. Thornton, Wheeling, and in closing by Dr. Barber.

Dr. W. Ross Morris, of Alpoca, read a paper on "Tetany," which was discussed by Drs. John T. Thornton, Wheeling, A. H. Hoge, Bluefield; Harold C. Miller, Eglon; C. L. Holland, Fairmont, and William Sheppe, Wheeling, and in closing by Dr. Morris.

A paper entitled "Quinidin: A Digitalis Substitute?" was read by Dr. M. L. Bonar, Morgantown, and was discussed by Drs. D. A. MacGregor and O. B. Beirn, and by Dr. Bonar in closing.

A paper on "Acute Poliomyelitis; Case Reports," was read by Dr. H. A. Walkup, MacDonald, and was discussed by Drs. R. A. Ashworth, Moundsville; M. L. Bonar, Morgantown; S. S. Wade, Morgantown, and A. A. Shawkey, Charleston, and in closing by Dr. Walkup.

Dr. R. Morris Wylie, of Huntington, read a paper entitled "Infectious Mononucleosis," which was discussed by Drs. S. L. Cherry, Clarksburg; C. W. Waddell, Fairmont, and

R. A. Ireland, Charleston, and by Dr. Wylie in closing.

Dr. Walter G. Stern, of Cleveland, Ohio, (invited guest), gave an address on "Some Problems of Modern Orthopedic Surgery," illustrated by lantern slides. This was discussed by Drs. John Oliver Rankin, Wheeling, and E. Bennette Henson, Charleston, and in closing by Dr. Stern.

Afternoon Session

The Association met at two-thirty in the hall of the Elks' Home, and was called to order by the President.

Dr. Southgate Leigh, of Norfolk, Va., (invited guest), read a paper entitled "Problems Confronting the Profession."

A paper entitled "The Treatment of Vomiting of Pregnancy" was read by Dr. Paul Titus, of Pittsburgh, Penna., (invited guest).

Dr. Leo Brady, of Baltimore, Md., (invited guest), read a paper on "The Treatment of Endocervitis," which was discussed by Dr. H. G. Steele, of Bluefield, and in closing by Dr. Brady.

Dr. Verne C. Hunt, Rochester, Minn., (invited guest), read a paper on "Benign Prostatic Hypertrophy, with Consideration of Associated Conditions," which was discussed by Drs. F. E. Roberts, Wheeling; Albert E. Goldstein, Baltimore, Md.; and G. G. Irwin, Charleston, and by Dr. Hunt in closing.

The Association then adjourned, to meet again on Thursday.

THURSDAY, MAY 27, 1926

The Association met at eleven A. M. for the scientific session, in the hall of the Elks' Home, and was called to order by the President.

A paper entitled "Discussion of Some of the More Common Complications in Ear, Nose, and Throat Diseases," was read by Dr. C. B. Wylie, of Morgantown, and was discussed by Drs. C. L. Holland, Fairmont; V. T. Churchman, Charleston; W. J. Judy, Parkersburg; C. H. Keesor, Wheeling; A. P. Butt, Elkins; F. T. Scanlon, Morgantown, and H. A. Walkup, MacDonald.

Dr. W. C. Thomas, of Huntington, read a paper on "Trachoma: A Public Health Problem," which was discussed by Dr. C. H. Keesor, Wheeling, and by Dr. Thomas in closing.

Dr. P. R. Fox, of McComas, read a paper entitled "The Consideration of Acute Abdominal Pain from the Standpoint of the General Man," which was discussed by Drs. A. H. Hoge, Bluefield, and H. H. Bolton, Pierce.

A paper on "Obstetrical Complications" was read by Dr. James A. Riedy, Monongah; and one on "Obstetrics, Viewed by a General Practitioner," by Dr. Joseph L. Miller, of Thomas. These papers were discussed by Drs. H. H. Bolton, Pierce, and L. H. Howard, Fairmont, and by Dr. Riedy in closing.

The paper of Dr. G. G. Irwin, Charleston, entitled, "Focal Infections as an Etiological Factor in Urological Diseases," was read by title.

Afternoon Session

The Association met at two P. M. in the hall of the Elks' Home, and was called to order by the President.

Dr. Albert E. Goldstein, of Baltimore, Md. (invited guest), read a paper on "The Diagnosis and Treatment of Urinary Stasis," which was discussed by Drs. R. A. Bobbitt, Huntington; G. G. Irwin, Charleston; T. Jud McBee, Morgantown, and J. W. Gilmore, Wheeling, and by Dr. Goldstein in closing.

Dr. Magnus A. Tate, of Cincinnati, Ohio, (invited guest), read a paper entitled "Treatment of Varicose Veins of the Pelvis." At the request of the President, Dr. Wm. S. Gardner, of Baltimore, opened the discussion of this paper. Dr. Tate replied briefly in closing.

The Association then adjourned sine die.

COUNCIL MEETINGS

May 27, 1926

The Council met at 2 P. M. in Room 309, Hotel Morgan, Morgantown, with the following members present: R. H. Dunn, John Folk, C. H. Hall, H. P. Linsz, C. H. Maxwell, C. R. Ogden, J. E. Rader, C. A. Ray, H. G. Steele, W. E. Vest and C. G. Morgan. Also present: James R Bloss, President, and Hugh G. Nicholson, Treasurer, members ex-officio,

and Sterrett O. Neale, Executive Secretary.

The meeting was called to order by Dr. Bloss, the President, who stated that the Council had not organized after the meeting at Bluefield last year, and asked for the nomination of a chairman. Dr. Ray nominated Dr. Linsz. This motion was seconded by Dr. Dunn, and Dr. Linsz was unanimously elected.

Dr. Linsz assumed the chair. The roll was then called by the Executive Secretary, and a quorum found to be present.

The report of the Executive Secretary was read by him. Mr. Neale also read financial statements covering the operation of the Association headquarters and *The Journal*. The Chairman appointed Drs. Ray, Steele and Dunn as a committee to audit these reports.

The report of the Committee on Public Policy and Legislation was read by the Executive Secretary. Dr. Steele asked that action on that part of the report referring to the Harrison Narcotic Act be deferred until another time. Drs. Steele and Ray and Mr. Neale were appointed as a committee to consider and report upon the recommendations contained in this report.

The Executive Secretary read the report of the Committee on Professional Relations, which was discussed by Drs. Bloss, Ray and Steele. Dr. Ray moved that the report be accepted and referred to a committee for consideration of the recommendations therein, and the Chairman appointed the following as the committee: Drs. Vest, Maxwell and Hall.

The Chairman called for the report of the Committee on Scientific Work, and the Executive Secretary reported that the committee had held a meeting in Charleston and made the plans from which the program has resulted, the program being offered as the report of this committee. The report was accepted.

Mr. Neale read the report of the Committee on Publication, which was discussed by Drs. Steele, Linsz, Vest, Ogden and Bloss, and Mr. Neale. On motion of Dr. Linsz, the report was received with commendation and appreciation. Dr. Vest spoke of the necessity of doctors throughout the state sending in news notes about the profession for *The Journal*, and Dr. Ray asked that members of the profession send in communications on matters of general interest.

The Chairman called for the report of the Committee on Necrology, and the Executive Secretary stated that he had a list of all members who had died, so far as he had been able to obtain them.

The matter of incorporating the Association was next taken up, and Mr. Neale read a letter from Mr. John V. Ray, the attorney for the Council, and a proposed resolution to be presented to the House of Delegates. Dr. Vest moved that the resolution be adopted, and be referred to the House of Delegates, with a recommendation that they adopt it. The motion was seconded by Dr. Ray, and unanimously carried, and the resolution was signed by the members of the Council present. Dr. Bloss moved that the reading of the Constitution and By-Laws be dispensed with, as the copy submitted is a corrected one, with all amendments incorporated. This motion was seconded by Dr. Steele, and carried.

The Treasurer, Dr. Nicholson, read his report, which was referred by the Chairman to an auditing committee composed of Drs. Morgan, Ogden and Rader. The report of the special committee, appointed by the Council to receive funds in lieu of the Treasurer, was then read, and was referred to the same committee.

After discussion by Drs. Vest, Dunn, Ogden, Bloss, Ray, Steele and Rader, Dr. Bloss moved that Mr. John V. Ray be directed to continue to represent the West Virginia State Medical Association in the legal matters relating to the bankruptcy proceedings of Dr. Nicholson, and in any other legal business which may come up affecting the Association in the future. This motion was seconded by Dr. Vest, and unanimously carried.

Dr. Morgan moved that a vote of thanks be given to Drs. Ray and Dunn for their good work in this matter up to the present time, and that they be continued as a special committee to handle the matter until January 1, 1927, or until such time as the Treasurer's successor shall be duly elected and installed. Seconded by Dr. Vest, and carried.

Dr. Maxwell moved that the Council meet

on December twenty-eighth of each year (unless the twenty-eighth fall on Sunday, the meeting in that case to be held on the twenty-ninth), and review the business transacted during the year. This motion was seconded and carried.

The Chairman then called for the reports on the councillor districts, and Dr. C. G. Morgan reported as follows for the First District:

"The First District is in very good condition. I think really the worst county is my own county, Marshall, with a delinquency of about seven members. That is due to the fact that they have had the idea that if a man did not pay his dues by the first of April, he had to go through the whole business of being re-elected. Some have done that, but others have refused to do it. I wish there were some way we could override that through the State Association. The membership in the First District as of May is as follows:

County	1925	1926	Delinquents
Brooke	10	10	1
Hancock	13	11	2
Marion	58	58	----
Marshall	32	26	7
Ohio	97	77	20
Taylor	15	11	4
	225	193	34

Dr. Linsz reported as follows for the First District:

"Ohio County is in fair condition, having fallen back a little. We have some 80 members paid up, but should have 100. Outside of that I think everything is in good shape. In Brooke county there has been some little trouble. In Hancock county there was a little dispute about a man who went there from Kanawha county, where he was a member of the county society. Something happened that they would not let him in, but I told him to get a letter of transfer, and I think the matter will be settled without any difficulty."

Dr. C. H. Maxwell reported as follows for the Second District:

"I wish to submit the following report of the present condition of the societies of the Second District:

The data for the Eastern Panhandle shows that in 1925 there were twenty-two members, but in 1926 up to the present time there are only sixteen who have paid their dues.

They have meetings every two months which are not well attended.

The Grant-Hardy-Mineral-Hampshire Society is in good shape. They have one delinquent, and have twenty-seven paid members, one more than they had in 1925. Their condition is better.

Preston has made greater progress than any of them. Her membership in 1925 was twelve. It is now twenty with none delinquent. They usually have only one meeting a year.

Monongalia Society is in good condition, with monthly meetings which are fairly well attended. The younger men do not attend as well as the older.

There were forty-five paid members in 1925. Up to the present there are forty-two who have paid their dues. During the present year two of the members have died. Dr. Hardy, one of the best surgeons, died with angina pectoris in a Pittsburgh hospital. The hardest working one, Dr. Borror, met a violent death at the hands of an infuriated nurse.

There are twelve physicians in the county that are not members. Most of them could join. One colored doctor, probably could not be elected, although we are mighty close to the Pennsylvania line.

The Monongalia County Society had a little trouble within its gates. This society passed a resolution asking the State Executive Secretary to withhold a doctor's card of membership for 1926, after the dues had been paid, but before the Secretary had recorded it. It is my belief the County Society had no right to ask this, as there had been no specific charges made against this man, and he had had no opportunity to find out the cause of the resolution. He had been notified to appear before the Society at its next meeting, show cause why his membership should not be cancelled. I was taking steps, as councillor, to have this matter adjusted without

any trial before the Society. But the doctor in question did not live to hear the charges that were to have been brought against him. I would like to have the Council's opinion on this point.

This doctor had two nurses working for him, and he would send them out to see his patients. One of the nurses—the one that stabbed him—had been arrested for practicing medicine without license, but was not held for the grand jury.

We had an important malpractice suit during the last year. Dr. Borror was sued for $100,000, for alleged malpractice in reducing a dislocation of the shoulder, the suit never came to trial, but settled out of court. The parties of this suit were Dr. Moser and Dr. Howell. Dr. Borror carried no insurance against malpractice, the other doctors had innsurance, as I understand. I went to Mr. S. F. Glasscock and asked him to look out for the interest of the West Virginia Medical Association in this case. The other insurance companies employed their attorneys. Dr. Borror settled it out of court for $2,500, without consulting the other parties of the suit. The matter was brought up before the Council at Charleston at a special meeting and they ordered the attorney for Dr. Borror to be paid $150. The entire bill of Glasscock's was $500. That check has never been turned over to Glasscock as Dr. Linsz informed me. This is about the status of the affair at the present time. Dr. Borror, as you know, died recently without an understanding with the attorneys for the insurance companies.

I sent a request to the Secretaries of the Societies to submit a report of the condition of their respective societies, but got no report from any of them except Dr. Irons of the Barbour-Randolph-Tucker, whose report I submit, showing the thorough manner in which a good Secretary attends to his duty."

Dr. C. R. Ogden reported as follows for the Third District:

"Since our last stated communication we beg to make the following report of the Third District:

We believe the condition of the medical profession in counties comprising the Third District, to be now, probably, in as good condition if not better than at any time in its history. The situation as to paid-up membership is as good, we think, as any other district in the state and that the general interest manifested by the profession in this district is quite gratifying.

The Ritchie Society was merged with the Parkersburg Academy, in the Fourth District, a loss to the Third District of thirteen members.

The Doddridge Society has a paid-up membership this year of only three, as against five in the year of 1925. Delinquents 2.

Lewis county has a paid-up membership 1926 of 15 as against 17 for 1925. Delinquents 2.

Harrison county lost one member by death and one by transfer, having in 1926 a paid-up membership of 77 with two honorary members as against a paid-up membership of 79 in 1925.

Upshur has awakened and reorganized, with a paid-up membership of eight in 1926, as against five in 1925.

Our greatest increase for 1926 came from the Central West Virginia Society (formerly Webster-Nicholas) now comprising Webster, Nicholas and Braxton, with a paid-up membership in 1926 of 20, last year only 3.

Notwithstanding the severe loss of thirteen from Ritchie, we still have a net gain over 1925 of one paid up membership in the district and two honorary members from Harrison.

We believe the condition of the Association affairs in the Third District to be very satisfactory. Harrison county has, with Marion and Monongalia counties, effected an organization, whereby these three counties are having combined sessions three times a year, and which so far have greatly stimulated the professional activities in the upper Monongahela Valley."

Dr. W. E. Vest reported as follows for the Fourth District:

"We, the Councillors for the Fourth District, herewith submit our report as follows:

There are two regularly organized societies in the Fourth District—the Cabell County Medical Society and the Parkersburg Academy of Medicine—the latter having re-

cently superseded the Ohio Valley and Little Kanawha organization.

For the year ending December 31, 1925, the Cabell County Medical Society numbered 92 paid memberships and the Parkersburg Academy 52.

So far in the year 1926 there are 80 paid memberships in the Cabell County Society with 16 of last year's members delinquent. The Cabell County Society is thus twelve members short of the total membership of last year. The Parkersburg Academy contains 63 paid members for this year with four of last year's members still delinquent. This shows a net gain of eleven for 1926 over 1925 but during 1926 Ritchie County is included.

The Parkersburg Academy was visited on March 31 by the State President, Dr. James R. Bloss, and one of the Councillors from this district.

There is still available much material in the district which should be in the organized profession. It seems to us that probably a union meeting of the two societies in the district might be arranged at Point Pleasant with the idea of organizing a Mason County Society or of including the eligibles of Mason county in one of the present active societies in the district. It seems further that it might not be amiss to invite the Kanawha Medical Society to participate in such a meeting. All three organizations are close enough that a good attendance could be arranged, and it would mean much to the state organization to have Mason county organized and at work again."

There was no report from the Fifth District.

Dr. R. H. Dunn reported as follows for the Sixth District:

"The membership situation in the Sixth Councillor district is particularly encouraging. Already this year a gain over the total enrollment of 1925 is shown with prospects of one of our societies, the Greenbrier Valley, forging rapidly to the front during the summer and fall months. Comparative figures on membership as supplied by the Executive Secretary's office show:

County	1925	1926	Delinquents
Fayette	38	45	2
Kanawha	107	112	10
Greenbr'r Valley	22	19	3
Raleigh	43	39	4
Totals	210	215	19

During the twelve months since our last meeting, councillors have visited the Fayette, Raleigh, Kanawha societies and have participated in a joint meeting between the Kanawha and Logan societies. Also, sessions of the Cabell County Society have been attended.

With the opening of roads in the Greenbrier Valley area which comprises Greenbrier, Pocahontas and Monroe counties, meetings are contemplated to further the interests of organized medicine."

The Council then adjourned, to meet at the call of the Chairman.

May 26, 1926

Pursuant to adjournment on yesterday, May 25, 1926, the Council of the West Virginia State Medical Association met in Room 309, Morgan Hotel, Morgantown, West Virginia, at 1:15 o'clock, P. M., on Wednesday, May 26, 1926.

Present: Henri P. Linsz, C. G. Morgan, C. H. Maxwell, John Folk, Chester R. Ogden, Joseph E. Rader, Walter E. Vest, J. Howard Anderson, C. A. Ray, Harry G. Steele and R. H. Dunn; also Executive Secretary, Mr. Sterrett O. Neale.

Dr. Linsz assumed the chair and called the meeting to order.

The minutes of last meeting of Council were read by the Executive Secretary, and on motion duly made and seconded, the minutes were accepted as read.

The Committee on Finance submitted its report, which after discussion, was accepted by motion duly made and seconded.

The Committee on the Treasurer's Report submitted its report, which was read by Dr. Morgan as follows:

"Your committee appointed by the Council of the West Virginia State Medical Association to audit the financial account of Dr.

Hugh G. Nicholson, treasurer, find in checking up his accounts that he owes to the West Virginia State Medical Association on April 12, 1926, the following amounts:

General Fund	$ 3,286.36
Med. Defense Fund	6,278.63
Indigent Fund . . .	6,439.00
Total	16,003.99
Int. to April 12 . .	4,114.83
Total Amt. Due . .	$20,118.82"

On motion duly made and seconded the report was adopted as read.

The report of the Committee on Professional Relations was read by Dr. Vest, as follows:

"We, your Committee to consider the report of the Committee on Professional Relations, herewith report that we have carefully gone over the outline presented of work done and contemplated, and we wish to commend this committee upon their accomplishments. We feel sure that this field of work is as yet barely scratched, and its possibilities are very great. Careful work here means a great benefit to both laity and profession."

The report and recommendation was duly accepted upon motion duly made and seconded.

Dr. Morgan moved the Council that all papers pertaining to any investing of any money coming into the hands of anybody for the West Virginia Medical Association, be brought by such persons and produced to the Association at the next meeting of the Council, to be held in the latter part of the year. Dr. Steele seconded the motion, and on vote duly taken the motion carried.

The Committee on the Report of the Public Policy and Legislation Committee submitted its report, and recommended that it continue its efforts to accomplish its work, especially as to tax on physicians' incomes, and particularly the ruling of internal revenue department that physicians must pay income tax upon expenses incurred while taking post graduate courses, attending conventions, etc., and particularly recommended opposition to the general world war veterans' act, which provides for the creation of an out-patient department in the veterans' bureau to give free hospital and surgical services, etc. On motion duly made and seconded the report was accepted.

The Executive Secretary retired from the room, and the following report of the Committee on Executive Secretary's Report was read, and on motion duly made unanimously adopted:

"We, your committee, beg to report that we have examined carefully the annual report of Executive Secretary Neale, and recommend that the Council approve the same and extend to Mr. Neale a vote of thanks for the efficient manner in which he has conducted and handled his office and the business of the Association. In view of the fact that the actual expenses were so much less than the estimate suggested by the committee to install this office, we recommend that the Council increase Mr. Neale's salary from $3,000 to $3,300 per year.

Respectfully,
C. A. RAY,
H. G. STEELE,
R. H. DUNN."

After discussion of the duties of the Scientific Secretary and of the Committee on Publication, on motion duly made and seconded it was voted that Dr. Bloss be placed on the Committee on Publication to succeed Dr. Waddell, and that the committee be composed of Dr. Ray, Chairman, Dr. Anderson, Dr. Vest and Dr. Harry M. Hall, to serve until January 1st, 1928.

No other business being before the council, the council adjourned, on motion duly made and seconded, until tomorrow, Thursday, May 27th, at the same place, after the meeting of the House of Delegates.

May 27, 1926

Pursuant to adjournment on May 26, the Council convened at 11 A. M. in the Directors' Room of the Elks Club at Morgantown.

Organization of the Council being the first order of business, Dr. C. A. Ray was unanimously elected Chairman of the Council.

Organization of the Medical Defense Committee then being in order, Dr. H. R. Johnson was chosen Chairman, and Drs. C. G. Morgan, and I. D. Cole were designated members.

As a special order of business, Dr. F. W. Fawcett of the Greenbrier Medical Society was elected to honorary membership in the State Association.

The retiring Chairman, Dr. Henri P. Linsz, then gave a very exhaustive report covering the large number of years in which he had been Chairman of the Medical Defense Committee. All the expenditures from the Medical Defense fund, and the condition of the fund were set forth.

Dr. Anderson thereupon moved that the Council spread upon its minutes, upon the records of the Association, the Council's recognition of Dr. Linsz's "splendid and economic management of the Medical Defense fund." The motion was seconded by Dr. Rader, and was adopted without dissenting voice.

It was then moved by Dr. W. E. Vest that the special committee composed of Drs. Ray and Dunn, take any steps deemed necessary with regard to taking over Dr. Hugh G. Nicholson's insurance policies. The motion was seconded by Dr. Rader, and adopted by a unanimous vote.

The Council thereupon adjourned sine die.

HOUSE OF DELEGATES

Monday, May 24, 1926

The House of Delegates met in the club room of the Hotel Morgan, Morgantown, at 7:30 P. M., and was called to order by the President, Dr. James R. Bloss.

Upon roll call by the Executive Secretary, the following members were present:

Cabell County—G. D. Johnson, R. M. Bobbitt.

Grant-Hardy-Hampshire-Mineral — A. A. Scherr.

Kanawha—T. M. Barber, F. P. Weltner, L. L. Aultz, A. A. Shawkey, J. R. Shultz.

Parkersburg Academy—R. H. Paden, J. T. Goff.

Marshall—W. P. Bonar.

Mercer—H. G. Steele, David Littlejohn, A. H. Hoge.

Monongalia—G. R. Maxwell, C. B. Wylie.

Ohio—H. M. Hall, E. L. Armbrecht, D. A. MacGregor.

The following members ex-officio were also present: J. R. Bloss, President; H. G. Nicholson, Treasurer; Drs. Dunn, Linsz, Maxwell, Morgan, Rader, Ray, and Vest, Councilors; Drs. Ashworth, Jeffers, Moore and Simpson, Past Presidents.

The report of the Executive Secretary and financial statements covering the operation of the Association office and of *The Journal* were read by Mr. Neale. On motion of Dr. Ashworth, seconded by Dr. Steele, a rising vote of thanks was given to Mr. Neale for his splendid report and for his very efficient work.

Reporting for the Committee on Scientific Work, Mr. Neale stated that a meeting of the committee had been held in Charleston at which plans for the program for this meeting had been made. The program was presented as the committee's report, and was accepted.

The Executive Secretary read the report of the Committee on Publication, which, on motion of Dr. Linsz, seconded by Dr. Littlejohn, was received and filed.

The report of the Committee on Public Policy and Legislation was read by Mr. Neale, and on motion of Dr. Steele, seconded by Dr. Dunn, was received and filed.

The report of the Committee on Professional Relations was read by the Executive Secretary, and, on motion of Dr. Morgan, seconded by Dr. Linsz, was received and the committee thanked for the report.

Dr. Nicholson read his report as Treasurer and then made a statement relative to how Association funds had been invested. The House of Delegates thereupon went into executive session.

The executive session ending, Dr. Shultz offered the following motion: That the House of Delegates of the West Virginia Medical Association turn over the matter of finances to the Council and its representatives to be worked out in the most adequate manner possible.

This motion was seconded by Dr. Aultz. Dr. Ashworth then moved to postpone action on it until the next meeting because of the small attendance present at this meeting. Dr. Ashworth's motion was seconded by Dr. Ogden, and discussed by Drs. Dunn, Ogden,

Armbrecht, and Shultz. A standing vote was taken, resulting as follows: 11 for; 15 against.

The President then put Dr. Shultz's motion, which was carried without a dissenting vote.

Dr. Ray then read the report of the special committee appointed by the Council to receive and handle funds in lieu of the Treasurer.

New Business

The President read a resolution submitted to the House of Delegates by the Council, in regard to incorporating the West Virginia State Medical Association. On motion of Dr. Linsz, seconded by Dr. Steele, the resolution was unanimously adopted.

The following were elected as honorary members:

Dr. B. F. Harden, Brooke County. (On motion of Dr. Linsz, seconded by Dr. Morgan.)

Dr. D. C. Louchery, Clarksburg. (On motion of Dr. Ogden, seconded by Dr. MacGregor.)

Dr. P. H. Swann, Cabell County. (On motion of Dr. Vest.)

Dr. B. B. Ranson, Eastern Panhandle Society. (On motion of Dr. Ashworth.)

Upon the statement of Dr. Rader that Dr. Dye of Grantsville is incapacitated because of illness, Dr. Linsz moved that his dues be remitted during the period of his incapacity. This motion was seconded and carried.

The House of Delegates then adjourned, to meet at the call of the President.

Thursday, May 27, 1926

The House of Delegates met in the hall of the Elks Home, Morgantown, at 8 A. M., and was called to order by the President, Dr. Bloss.

After the roll call, Dr. Bloss called for nominations for President, and Dr. Robert A. Ashworth, of Moundsville, nominated Dr. Chester R. Ogden. Dr. D. A. MacGregor, Wheeling, moved that the nominations be closed, and that the President cast the unanimous vote of the House for Dr. Ogden, which motion was seconded by Dr. C. H. Maxwell, and carried. Dr. Ogden was escorted to the chair by Dr. Ashworth and Dr. H. P. Linsz, and then spoke as follows:

"Gentlemen of the Association: Sometimes I am accused of being a talker, but this is one time in my life when I feel that I have not a great deal to say, and I cannot say much, but what I do say I want you to know is coming from the bottom of my heart. I deeply appreciate this honor you have conferred upon me, and I cannot command words to express to you what is in my heart this moment. I remember a meeting at Fairmont I attended, when Dr. T. L. Barber was President. I was just breaking into the society then, and he did me the honor to call on me for a few words. At that time I had the baptism of fire that inspired me to do what I could to be of service to my state organization, and during all these years I have tried to do what I have been asked to do. Dr. Ashworth has spoken something of what I have done for the association, but I have done only what I felt it was my duty to do, and what any other man in my position would have done.

"I shall not take any more of your time. I deeply appreciate this honor, and while I cannot hope to exceed those who have preceded me, I shall do my best to uphold the honor and dignity of the association and to fulfill the duties laid upon me. I look upon you as my friends, for this honor has come to me unsolicited, and the fact that it is unanimous makes me value it the more. I beg you to give me your support and your cooperation during the coming year. I thank you from the bottom of my heart for this very generous expression of your affection for me, and I promise to do my best to uphold the honor and dignity of this association."

(Applause.)

Dr. Bloss, President, called for nominations for First Vice-President, and Dr. Walter E. Vest nominated Dr. C. B. Wylie of Morgantown. This nomination was seconded by Dr. J. E. Rader, and Dr. B. S. Rankin of Tunnelton moved that the nominations be closed and that the President cast the unanimous ballot of the Association for Dr. Wylie. Motion seconded by Dr. W. P. Bonar, Moundsville, and carried.

Second Vice-President. Dr. H. A. Walkup,

MacDonald, nominated Dr. Claude Frazier, of Powellton, which nomination was seconded. Dr. J. C. Irons moved that the nominations be closed and that the Secretary cast a unanimous vote for Dr. Frazier. Motion seconded by Dr. Ben Golden, and carried.

Third Vice-President. Dr. H. P. Linsz nominated Dr. E. L. Armbrecht, of Wheeling. Dr. Rader and Dr. Walkup moved that the nominations be closed and that a unanimous vote be cast for Dr. Armbrecht, which motion was carried.

Treasurer. Dr. V. T. Churchman nominated Dr. T. Maxfield Barber, of Charleston, which nomination was seconded by Dr. C. A. Ray, Charleston. Dr. C. O. Henry, Fairmont, moved that the nominations be closed and that the Secretary cast the unanimous ballot of the Association for Dr. Barber. This motion was seconded and carried.

Councilors

First District. Dr. C. G. Morgan nominated Dr. Linsz to succeed himself for two years. Dr. Linsz declined the nomination in the following address:

"For twenty years I have been a councilor of the State Association. You have also given me the honor of electing me as president, and I have been delegate to the American Medical Association on several occasions, and to other associations throughout the country, for which honors I am absolutely proud and thankful. Now, this is my twentieth anniversary, and by the time I shall have finished my present term as councilor I shall have served exactly twenty years and eight months. I feel that I should relinquish my office as councilor of the first district, and not allow my name to be presented for reelection. I wish to call it a day, and to have my work carried on by someone else. Therefore, I wish to thank you for the courtesy, and for the assistance I have received, not only from the members, but from the other councilors as well. I feel that this is the time to celebrate my twentieth anniversary by withdrawing from my post. In twenty years I have missed only one meeting, and that was when I lay paralyzed at Battle Creek. I hope that the gentleman who presented by name will withdraw that nomination, and place in nomination someone else from the first district."

Dr. C. O. Henry nominated Dr. H. R. Johnson, of Fairmont, which nomination was seconded by Dr. V. T. Churchman. Dr. Morgan then withdrew the nomination of Dr. Linsz, and Dr. Bonar moved that the nominations be closed and that the Secretary cast the unanimous vote of the Association for Dr. Johnson. This motion was seconded by Dr. Armbrecht, and carried.

Dr. Robert A. Ashworth asked that the remarks of Dr. Linsz be incorporated in the record. Dr. Walter E. Vest moved that the House of Delegates give Dr. Linsz a rising vote of thanks for his long and untiring service to the Association. Dr. H. G. Steele, in seconding this motion, called attention to the fact that Dr. Linsz's service as a member of the Committee on Medical Defense had not been mentioned. The motion was carried unanimously, with applause.

DR. LINSZ: "Gentlemen, I thank you. It has been a pleasure to do what I could, and I wish I could have done more. I thank you."

Second District. Dr. John N. Simpson nominated Dr. C. H. Maxwell, of Morgantown, to succeed himself. Dr. C. O. Henry seconded the nomination, and moved that the nominations be closed. This motion was seconded by Dr. John Thames, of Kingwood, and carried.

Third District. Dr. H. G. Steele nominated Dr. John Folk to succeed himself, which nomination was seconded by Dr. L. C. Goff, of Clarksburg. Dr. Walkup moved that the nominations be closed and that the President cast the unanimous vote of the Association for Dr. Folk, which motion was seconded and carried.

Dr. Chester R. Ogden nominated Dr. I. D. Cole to fill the unexpired term of Dr. Ogden as councilor, and Dr. B. S. Rankin, of Preston, nominated Dr. H. H. Haynes, of Clarksburg, to succeed Dr. Ogden. Dr. H. G. Steele moved that the nominations be closed, which motion was seconded by Dr. O. L. Hudkins. After three indecisive ballots, Dr. Haynes asked that his name be withdrawn, and Dr. Cole was declared elected.

Fourth District. Dr. R. H. Paden, of Parkersburg, nominated Dr. Roy Ben Miller, of

Parkersburg, which was seconded by Dr. Richmond. Dr. Walter E. Vest nominated Dr. J. E. Rader to succeed himself. On motion of Dr. Steele, seconded by Dr. Linsz, the nominations were closed and the House proceeded to vote. The ballot resulted as follows: Rader, 42; Miller, 25; and Dr. Rader was declared elected.

Fifth District. Dr. R. S. VanMetre nominated Dr. J. Howard Anderson to succeed himself. Dr. Linsz seconded the nomination, and moved that the nominations be closed. Motion seconded by Dr. Walkup, and carried.

Sixth District. Dr. J. R. Shultz nominated Dr. R. H. Dunn to succeed himself. On motion of Dr. R. M .Bobbitt the nominations were closed, and Dr. Dunn declared elected.

Committees

Public Policy and Legislation. Dr. C. A. Ray nominated Dr. R. A. Ireland, Charleston, as chairman. Nomination seconded by Dr. Rader, who moved that the nominations be closed. Motion seconded by Dr. Bonar, and carried.

Professional Relations. The President called for nominations for a member to succeed Dr. Nicholson, who was elected for a term of one year. Dr. C. A. Ray nominated Dr. Nicholson to succeed himself for the term of five years. Dr. Dunn moved that the nominations be closed and that Dr. Nicholson be declared elected. Motion seconded by Dr. Byrd Hunter, and carried.

Scientific Work. Dr. Linsz nominated Dr. H. G. Steele as chairman, and Dr. Ashworth moved that the nominations be closed and that the Secretary cast the ballot of the Association for Dr. Steele. Motion seconded and carried.

Dr. J. Howard Anderson nominated Dr. C. N. Keesor, of Wheeling, and Dr. C. O. Henry nominated Dr. E. P. Smith, of Fairmont, as members of the committee. Dr. Churchman moved that the nominations be closed and these two declared elected, which motion was seconded by Dr. Linsz, and carried.

Workmen's Compensation. Dr. Linsz nominated Dr. V. T. Churchman, of Charleston, as chairman. Dr. H. M. Hall nominated Dr. B. F. Harden, of Wellsburg. Dr. H. A. Walkup nominated Dr. W. R. Goff, of Parkersburg. Dr. C. A. Ray nominated Dr. R. H. Walker, Charleston. Dr. R. H. Dunn nominated Dr. W. A. McMillan. Dr. Goff stated that in his opinion the members of the committee should live in Charleston, and asked to have his name withdrawn. Dr. Walkup withdrew Dr. Goff's nomination. Dr. Harden also asked to have his name withdrawn. Dr. Dunn then moved that the nominations be closed, and that Drs. Churchman, Walker and McMillan be elected by acclamation, which motion was seconded and carried.

Public Health and Preventive Medicine. Dr. H. A. Walkup nominated Dr. David Littlejohn, of Charleston. This nomination was seconded by Dr. Linsz, who moved that the nominations for chairman be closed. Motion seconded and carried. Dr. B. I. Golden nominated Dr. John Thames, of Kingwood, and Dr. D. A. MacGregor nominated Dr. Will McLain, of Wheeling. Motion that the nominations be closed and these two be elected by acclamation; seconded; carried.

Delegate to American Medical Association. Dr. D. A. MacGregor, Third Vice-President, then took the chair, and called for nominations for delegate to the American Medical Association. Dr. C. O. Henry nominated the retiring president, Dr. James R. Bloss. This nomination was seconded by Dr. Churchman, who moved that the nominations be closed and Dr. Bloss be elected by acclamation. Motion seconded and carried.

Dr. Linsz nominated Dr. A. A. Shawkey as alternate. This nomination was seconded by Dr. Dunn and Dr. Steele, and Dr. Shawkey was elected.

The Executive Secretary read the report of the committee appointed to consider the President's address, which, upon motion of Dr. C. O. Henry, was adopted.

"We endorse the President's recommendation that the profession adopt better business methods.

"We also approve of the Committee of five to investigate the feasibility of the Association having its own home.

"We endorse fully his attitude toward vital statistics and observance and enforcement of health laws."

Dr. Bloss then resumed the chair, and

asked for invitations for the 1927 meeting of the Association. Dr. A. P. Butt extended an invitation to meet at White Sulphur Springs, which was seconded by Dr. Price. On motion of Dr. Ashworth, the invitation was accepted. After discussion, it was agreed that the time of the meeting should be decided upon by the local society and the Committee on Scientific Work.

Dr. Churchman offered the following resolution:

"Resolved: That hereafter all arrangements for halls and for commercial exhibits at the annual meeting of the West Virginia State Medical Association shall be arranged for by the Executive Secretary thus, relieving the local committee of this burden and expense."

Dr. Churchman moved the adoption of this resolution, which motion was seconded by Dr. Linsz, and carried.

At the request of the President, the Executive Secretary read the report of the Committee on Hospitals, which report, on motion of Dr. Churchman, was adopted.

The President called for nominations for members of the committee to investigate the practicability of building a home for the Association. On motion of Dr. Irons, seconded by Dr. Ray, the President was instructed to make these appointments.

The report of the Council was then made by Mr. Neale, Executive Secretary, who read the minutes of the meetings held by the Council. He then read the reports of the following committees:

Committee to consider the report on Public Policy and Legislation.

Auditing Committee.

Committee to consider the report on Professional Relations.

Committee to audit the report of the special committee appointed by the Council to receive funds in lieu of the Treasurer.

Committee to audit the Executive Secretary's report.

Mr. Neale reported for the Committee on Necrology as follows:

"The Committee on Necrology has the sad duty of reporting to this body the untimely death of the following respected and honored members of our profession:

"W. S. Borror, Morgantown.
"L. S. Brock, Morgantown.
"D. M. Brickey, Manbar.
"U. H. Debendarfer, Mannington.
"C. R. Enslow, Huntington.
"J. M. Goff, Burnt House.
"John A. Grier, Sistersville.
"Irvin Hardy, Morgantown.
"F. W. Hill, Montana Mines.
"Charles B. Lee, Glen Jean.
"B. H. Lovely, Welch.
"J. M. Lovett, Huntington.
"J. E. McDonald, Logan.
"William Neill, Charles Town.
"B. P. Ratcliff, Graham, Va.
"J. E. Roles, Union.
"J. W. Riffe, Meadow Creek.
"W. F. Shirkey, Sr,. Charleston.
"A. J. Swezey, Huntington.
"C. E. Wilkinson, Bruceton Mills.
"H. V. Varner, Clarksburg.

"Dr. Hoffman (Dr. Charles S. Hoffman), one of the former presidents and an honored member of this body, died in February of this year.

"It is with regret that we make this report, and it is recommended that the Secretary be instructed to spread upon the minutes of this association suitable resolutions, copies of which shall be sent to the families of the deceased."

Dr. Ogden suggested that reference be made to Dr. L. S. Brock as former First Vice President.

Dr. Linsz moved the confirmation of the reports from the Council to the House of Delegates, and the adoption of the suggestions made by the Council. Motion seconded by Dr. Harry Hall, and carried.

New Business

The Executive Secretary read a communication from the American Medical Association relative to the legislation pending for the extension of the time limit under the Sheppard-Towner act. Dr. C. A. Wingerter moved that the House of Delegates go on record as being opposed to any extension of time for the operation of the Sheppard-Towner act, and that the Executive Secretary be instructed to send telegrams to our

representatives in the United States Senate and House of Representatives conveying information of this action. Motion seconded by Dr. Linsz, and carried.

Dr. Vest moved that a committee of two, composed of Dr. C. A. Ray and the Executive Secretary, be appointed to draw up resolutions in regard to the Harrison Anti-Narcotic act. This motion was seconded by Dr. Ben Golden, and carried.

Dr. H. A. Walkup moved that the West Virginia State Medical Association take out a term life insurance policy on the life of Dr. Hugh G. Nicholson in an amount sufficient to cover the amount due the Association. Dr. Irons moved to table the motion, and Dr. Dunn seconded Dr. Irons' motion. Dr. Walkup withdrew his motion.

Dr. C. O. Post, Clarksburg, presented the following:

"Since the salaries of our West Virginia University School of Medicine Professors are not at all commensurate to the service rendered to the State, and since they are less than those paid to the Professors in the Law School, and since they are less than that earned ordinarily by doctors during their first years of practice;

"*Therefore:* Be it Resolved, that we, the House of Delegates of the West Virginia State Medical Association, recommend to the State Board of Education, that the salaries of the Professors in the School of Medicine, who hold membership in the American Medical Association, be raised to $6,000 for the year as a minimum."

He moved its adoption. The motion was seconded by Drs. Claude Frazier of Powellton and H. M. Hall of Wheeling, and the resolution was adopted.

Dr. R. A. Ashworth of Moundsville then read a statement into the records as follows:

"In West Virginia's educational system there are two professional schools requiring preliminary college preparation before admission. These two colleges are (1) Medicine and (2) Law.

"To secure an education sufficient for the practice of law one must spend two years in the College of Arts and Sciences, and three years in the law school, making a period of 5 years' preparation.

"To secure an education for the practice of medicine one must spend a minimum of two years in the College of Arts and Sciences, four years in Medical School, and at least one year of internship, a period of at least 7 years' preparation.

'Upon this basis of training, irrespective of the high calling of his profession, it would appear that the rank of a medical professor should be equal to, or superior to, any other in our educational system.

"How do we find the situation here?

"About three years ago the State Bar Association recognized the fact that a professional institution which required a college education for admission, was naturally above the rank of the college which supplied its recruits (even as a college is above a high school). So the association asked that the situation, in the matter of the Law School, be faced as a fact, and demanded that the salaries of their professors reflect a position of some dignity. Result: The salaries were advanced and are being advanced again. Next year the dean will receive $6,500, one of the professors $6,000, and the other professors in proportion. Without a doubt they deserve it, and we are glad they will receive it.

"But how about medicine?

"The salaries of the professors who are physicians are no more than those of the undergraduate school, and the dean of the medical school receives less salary than any other dean on the campus. Is this right? With a training superior to that of the law professor, this is a humiliation he has been obliged to endure for the ideals of medical education in this state. Should this state of affairs continue in the face of such an active, virile, forward looking state medical society as we are pleased to have?

"The lawyers of the state successfully corrected their situation by sending a personal representative to appear before the State Board of Education to present their case. They got results. In the matter of medical education the doctors have even a better case.

Therefore, even though the resolutions just passed are splendid, and may possibly serve their purpose, it is up to us to put some real kick into our actions ,and make "the powers that be" understand that this is a vital matter with us, and that we mean what we say. I therefore offer the following resolution in the form of a motion:

"*Be It Moved:* That the President of this association, or his direct representative, be authorized to appear in person before the State Board of Education, and make representations to that body relative to the medical policies inculcated in these resolutions."

His motion to adopt the resolution was seconded by Dr. Henri P. Linsz, and was carried.

Dr. W. P. Bonar of Moundsville moved the adoption of the following resolution:

"*Resolved:* That the Secretary be ordered to send copies of this resolution to the President of the State Board of Control, to the President of the State Board of Education of West Virginia; to the President of the West Virginia University, and to the American Medical Association and the Association of American Medical Colleges."

The motion was seconded by Dr. H. A. Walkup of MacDonald, and the resolution was adopted.

Dr. J. Howard Anderson offered the following motion:

"In order that we may express our appreciation of the delightful way in which we have been entertained here in this beautiful mountain city, I move that a rising vote of thanks be extended to the members of the Monongalia County Medical Society, and to the Members of the Woman's Auxiliary, and that the Secretary write letters to these organizations conveying information of this action."

This motion was seconded by Dr. Linsz and by Dr. Brown, and was carried by a rising vote.

The Chair recognized Dr. H. H. Haynes of Clarksburg, who made the following statement:

"At a meeting of the Harrison County Medical Society it was brought to the attention of that body that Tennessee had enacted a law levying a tax of ten per cent on the retail sales of tobacco in that State, the money derived therefrom to be used to increase the school funds. The Harrison County Society considered the practicability of raising funds by such a tax in this state, as an emergency measure, for combatting tuberculosis. On account of the long period of contagion, and the long period of care necessary, it is realized that it would be impracticable to secure an appropriation from the State large enough to meet the needs, and it is impracticable to take care of all cases in a state institution. It was thought that this matter might be presented to the West Virginia State Medical Association, and a committee was appointed to send out a letter to each component county society, which I wish Mr. Neale would read."

The letter was read as follows:

"To every member of the medical profession comes almost daily, the crying need of more facilities for the care of the tuberculous in our state. Our sanitarium at Hopemont is inadequate for the care of even the incipient cases. The great mass of the advanced cases is left to spread the infection among their families and friends. What would be more proper than that those who know the need best should start a movement for meeting this situation? The question was brought before the Harrison County Medical Society, the idea was approved, and a committee appointed to devise a plan of attack.

It is the desire of the committee that this plan be presented to each county society for discussion and approval or disapproval. Would you be so kind as to see that this is so presented to your society that an expression of opinion be secured and forwarded to us as soon as possible?

As might be inferred, the future plans of the committee will largely be determined by the degree of support given the plan.

The plan is as follows: Realizing the difficulty of raising by direct taxation, the large sum of money needed, it has occurred to us to follow somewhat a Tennessee law for raising revenue by a ten per cent tax on

tobacco. This tax would be levied on all tobacco sold in the state, and should raise more than one million dollars annually.

In a communication such as this, it would be impossible to give the law in detail and much change might seem wise after further consideration.

Are the physicians of West Virginian willing to get behind such a plan to give every tuberculous patient his best chance and protect the non-tuberculous from infection?

Yours very truly,

H. H. HAYNES, *Chairman.*
H. E. SLOAN,
A. J. KEMPER,
C. T. ARNETT,
J. F. WILLIAMS."

"A number of societies responded, some of them being enthusiastic over this suggestion. One society was opposed, and quite a number did not respond. My point is this—if anything is to be done in this matter, it must be done before the coming session of the legislature. It is much easier to get a law of this kind through than to get a direct appropriation. I am told that a movement is on foot to levy this tax for another purpose, and it is therefore important that we act upon this suggestion at this meeting. There are many objections to it, one being that it is out of the ordinary. Some say it is unconstitutional, but it is not. There was some objection from the Wheeling people, because, they said, it would saddle the whole burden of caring for the tuberculous on the Eastern Panhandle, where the tobacco factories are located. That is a mistake, however, because it is a tax on the retail sales of tobacco. Just how much money would be needed we do not know, nor how much could be raised in this way. In Harrison county alone it has been estimated that there are 500 cases of tuberculosis. There has been an average of five deaths a month for several years. I do not believe there is a man in the state so mean that he would not cut down his tobacco ten per cent, or spend the additional money. If this were done, we could make tuberculosis in ten years as rare as hydrophobia."

Dr. Thames moved that the matter be referred to the Committee on Public Policy and Legislation. Motion seconded. Dr. R. A. Ashworth discussed it, and moved that the matter be laid upon the table. The motion to table was seconded by Dr. Anderson, and on a standing vote, was lost. Dr. Vest, as President of the State Tuberculosis Association, urged that the Association go on record as favoring such a tax for fighting tuberculosis. The motion was discussed by Dr. Bonar, and by Dr. Thomas, who said that the state of Georgia had levied such a tax for the same purpose. Dr. Thames then withdrew his motion to refer the matter to the Committee on Public Policy, and Dr. Ben Golden offered the following motion:

"That the House of Delegates of the West Virginia State Medical Association go on record as favoring the placing of a tax of ten per cent on retail sales of tobacco in this state, the money derived therefrom to be used in the work of the prevention and cure of tuberculosis."

This motion was seconded by Dr. R. C. Hood, of Clarksburg. Dr. Thames offered an amendment recommending that the legislature also levy a tax of ten per cent on all sales of patent medicine in the state, for the same purpose, and Dr. Golden accepted the amendment. Upon representations by a number of members that such an amendment would invite attacks from the manufacturers of patent medicines, and probably make it impossible to tax either tobacco or patent medicines, Dr. Thames withdrew the amendment. After opposition was voiced by Dr. Ashworth, the motion was put to vote, and carried.

The House of Delegates then adjourned sine die.

REPORT OF THE EXECUTIVE SECRETARY

To the members of the Council and House of Delegates, West Virginia State Medical Association, Gentlemen:

Herewith is a brief synopsis of the activities of the Executive Secretary's office during the first year of its operation, 1925. The appended statement of finances will show the

membership situation as compared with the preceding year, 1924. Dues collected during 1925 and reported to the state treasurer were for 1,003 members as compared with 1,064 the year previous at the low rate of $5 per annum. During 1926, seven of the 1925 delinquents have paid their membership fees thus bringing the total to 1,010 and showing a net loss of but 54 members. There were 17 members whose deaths were reported during the year. There are 19 honorary members on the rolls.

The foregoing briefly covers the membership situation. Your Executive Secretary had the heartiest cooperation from the county secretaries and if there is any honor due to the flourishing condition of the membership it belongs solely to our county secretaries, who despite what I have been informed, were rather pessimistic forecasts at the beginning of the year, succeeded in reporting virtually 100 per cent memberships.

State Headquarters

This division of my report might be called a supplement to the report made at Bluefield covering the first five months of my incumbency as executive secretary. I have endeavored to adhere closely to the program of *Service to Members* and so have shaped the policies of the office as were consistent with the duties of the secretary as defined under the constitution and by-laws.

Total expenses for the year were $7,048. This was $748 more than your council committee on appointment and installation of an executive secretary had anticipated. The attached financial statement, however, discloses that where $400 had been estimated for office equipment and stationery, these two items totalled $808.36 and $270.06 or $1,078.42. The office equipment was purchased new as was a typewriter, mimeographing outfit, etc., the idea being that it was better economy to have up-to-date equipment than to be continually expending money for replacements and repairs. Aside from a storage cabinet purchased this year and a few more chairs, the equipment of the office should not need replacement for years to come.

An idea of the growth of your executive secretary's office and the large volume of work that has passed through it in the 12 months is shown by the postage item alone, this cost running to the sum of $297.06 and virtually every cent was expended for 2-cent stamps. In this connection the cost of letters to delinquent members was quite an item and there can be quite a saving on the annual postage bill if members would pay up promptly during the first three months of each year.

In connection with the equipment of state offices, I should like to have authority to place sufficient fire and theft insurance on it and the records to cover all loss in event of mishap. The records are highly important to the membership and while the offices are housed in a modern, fire-proof building, I believe it is a precaution that should be taken. It would take more than a year's work to replace the records should they be destroyed and since they have an intrinsic value that only your body can estimate, some estimate as to the amount of the coverage will be appreciated.

The Journal

Among the other activities of the secretary, he is the secretary-manager of *The West Virginia Medical Journal* and appended hereto is his statement on *Journal* finances for 1925. The volume of advertising carried during the year amounted to $3,638.44, which was about $70 more than the volume of business in 1924. However, this report cannot hold up 1924 *Journal* receipts for comparative purposes because many of the new contracts obtained in the year still are running and swelling the monthly volume of business. It is anticipated that *The Journal* will more than pay for its cost and other necessary expenses this year, 1926. It is interesting to note that Southern West Virginia supplied the bulk of the so-called local advertising. This probably is due to the fact that advertising has not been solicited in the cities of northern West Virginia as thoroughly as in the southern section. Your secretary proposes to visit these cities during the summer months and endeavor to line up ethical advertisers and sell them *The Journal.*

Every effort has been made to keep *The*

Journal's advertising columns clean and free from shady copy. It is believed that we have been successful. It has been necessary to refuse business that would have totalled more than $300 during the year because the products manufacturers sought to exploit, or institutions seeking admission to the advertisers columns were not approved by the American Medical Association. Two contracts alone, calling for full page advertisements on annual contract rates of $150 each were among those turned down, thus demonstrating that every effort is being made to keep the advertising columns clean and ethical.

In connection with *The Journal*, there is one request that I would like to make:

Members of the association, insofar as is consistent with their practice, should patronize *Journal* advertisers first.

It is surprising how much higher the publication will be rated if the membership proves it is reading not only the scientific and general news but the advertisements. Often there is published coupons which members are urged to send in to the manufacturers. There is an object in those coupons —they serve to show the advertiser that he is getting results from the money expended in *The West Virginia Medical Journal.* Those coupons always carry key-numbers that indicate where the coupon was printed. That is the method of checking up on the results obtained.

So, when members write to advertisers for information their letters show that your publication has a "pulling power" and that it is worthwhile to continue to expend money in it. And after all, the energy put forth in writing to advertisers reflects back in *The Journal* for as its income increases, it will be enlarged until it is second to none in the nation. I think that is the plan of the Committee on Publications.

The new *Journal*, now published in Charleston, is being obtained at a slight increase over 1925 printing costs. Its new appearance is in line with the expansion program sponsored for several years by President Bloss and others. The report of the committee on publication will be read showing the organization that has taken over the editorial activities.

The cost each month this year has been in the neighborhood of $320, including postage, and that demonstrates the importance of patronizing the advertisers in preference to the non-advertiser or the mail order house whose only contribution is a catalog for your office. After all, such patronage takes but little effort but it means much to the business management. If the companies with which you deal are not included in *The Journal's* advertising section, find out why the next time their representative calls upon you.

Operating expenses in 1925 were rather high due to the fact that it was necessary to go from Charleston to Huntington sometimes as often as three times a month to get the advertising section correct and ready to go to press. Also there was some expense connected with the transfer of the publication from Huntington to Charleston. However, this money now is being saved and will continue to be saved as long as your publication is issued in the capitol city.

Visits to Societies

It was estimated that the traveling expenses of the secretary would approximate $1,200 the first year. However, but $600.43 was expended. At the beginning of the year, it was necessary to visit Wheeling and take over the records of Dr. D. A. MacGregor, former secretary. Then came a round of visits to component societies. Your secretary has "dropped in" at meetings of the Parkersburg Academy of Medicine (formerly the Little Kanawha and Ohio Valley Medical Society), at Parkersburg; the Cabell County Society at Huntington; the Kanawha County Society at Charleston; the Mercer Society at Bluefield; the Raleigh County Society at Beckley; the Eastern Panhandle Society at Martinsburg; the Grant-Hardy-Hampshire-Mineral Society at Keyser; the Marion Society at Fairmont; the Harrison Society at Clarksburg; the Greenbrier Valley Society at Ronceverte; and he has conferred with officers of the Monongalia Society at Morgantown, the Taylor Society at

Grafton, and McDowell County Society at Welch.

In addition, upon instructions from the Council, he has visited Southwest Virginia Medical Society at Mountain Lake, Va., in company with Dr. Harry G. Steele and others; he visited the offices of the Ohio State Medical Association for three days last summer, studying the activities of that office; he attended the conference of editors and secretaries of state associations conducted in Chicago last November and from there went to Milwaukee to study the activities of the Wisconsin State Medical Society for two days.

The purpose of these visits outside West Virginia was to study the operation of these efficient organizations. Both Mr. Don K. Martin of Ohio and Mr. J. G. Crownhart of Wisconsin, extended every courtesy and gave your secretary many worthwhile points on the management of your business activities.

Service to Members

As has been said, the office is founded upon Service to the membership. Fortunately through a rather wide acquaintance in Charleston and in the capitol building, many of the requests for information have been expedited. More than one hundred claims pending in the Workmen's Compensation Department have been traced down and definite information obtained as to why fees had not been paid. Several cases pending before the U. S. Veterans' Bureau were investigated. Automobile license plates were obtained for several members. Information relating to the condition of roads was looked up. Probably more than twenty members were assisted in obtaining the services of relief men while they were taking their vacations or engaged in post-graduate study. Assistants were obtained for a few and a roster was started to continue this service. Only one difficulty was encountered and that relates to the fact that often relief men leave a position without notifying the secretary's office, thus necessitating considerable correspondence, etc., in locating them when other requests are made.

Automobile Insurance

This division of your state offices' activities likewise might be included under the heading of Service to Members. Unfortunately, after the plan of the Lumberman's Mutual Casualty Company to underwrite automotive insurance through your secretary's office was endorsed at Bluefield, we were rather late in getting started because stationery was printed with the wrong address and therefore was worthless. Also supplies were a little slow. However, there has been an increased interest in the plan whereby members save from 25 to 30 per cent of their automotive insurance cost and this year, as insurance expires many members in all sections are placing their business through the association's headquarters. Since last July we have written policies with total premiums of $1,020.67 and of this sum, commissions have been paid by the L. M. C. Co. amounting to $76.92, as is shown by the financial statement appended. Commissions due as of May 15th total some $30, the association getting 10 per cent of all insurance premiums written; this amount covers the cost of handling in state offices. It is believed that the insurance program will grow steadily in the future.

Conclusion

Your executive secretary does not propose to make this report tiresome. Suffice it to say that the work has been most interesting and he is greatly indebted to former President George D. Jeffers, Councillors C. A. Ray and R. H. Dunn and President James R. Bloss for their counsel and advice. He is also greatly indebted to members of committees who immediately responded to requests for information and who assisted in expediting all business pending before them. Every member of the council cooperated most heartily and without their mature judgment, the work would not have moved along so smoothly.

It has been a great pleasure to serve organized medicine in West Virginia, it has amounted to a liberal education. If the activities of the executive secretary's office during its first year have come up to the expectations of its friends and well-wishers, I am very happy and well compensated for what energy that has been expended.

Financial Statement

Executive Secretary's Office
Year of 1925

MONTHLY EXPENSE RECIPTS

January	$ 786.07
February	655.37
March	739.08
April	543.75
May	420.30
June	655.41
July	510.94
August	548.54
September	527.15
October	459.97
November-December	1,201.42
Total	$7,048.00

DISBURSEMENTS

Salary, Executive Secretary	$3,000.00
Salary, Stenographer	1,315.00
Office Equipment	808.36
Travelling Expenses	600.43
Postage	297.06
Printing and Engraving	270.06
Miscellaneous Small Items	126.69
Telephone and Telegraph	175.02
Mimeographing	55.51
Harry M. Hall (Pub. Committee)	28.46
Badges	49.54
Incidental Expense	21.87
Rent	300.00
Total Disbursements	$7,048.00

RECAPITULATION

Previously audited (accounts for January to May, inclusive)	$3,144.57
Exp. (June to December, inclusive:	
Salary, Executive Secretary	$1,750.00
Salary, Stenographer	850.00
Rent @$25 per month,	175.00
Postage	137.36
Printing	123.41
Office Equipment	205.86
**Travelling Expenses	417.93
Miscellaneous	59.04
Telephone and Telegraph	82.42
Mimeographing	24.41
Harry M. Hall, Pub. Com. Meeting	28.46
Badges for Annual Meeting	49.54
Total	$3,903.43

**Includes the following: Expenses to annual meeting, week of June 8, 1925; three days at Columbus; visit to Southwest Virginia Medical Society; expenses on visit to Milwaukee from Chicago; expenses incident to organization of office that were not included in first report.

Previously audited	$3,144.57
Last Seven Months	3,903.43
Total Expenditures	$7,048.00

FUNDS RECEIVED AND FORWARDED TO STATE TREASURER

Date	*No. Mem.*	*Amount*
Feb. 2.	61	$ 605.00
Feb. 20	131	1,317.00
March 3	48	480.00
March 25	137	1,368.00
April 13	73	731.00
April 22	194	1,946.00
May 1	157	1,582.00
May 27	63	625.00
June 6	48	483.00
Aug. 31	37	360.00
Jan. 1, 1926	54	433.50
Total	1003	$9,930.50
Less $5.00 refund from Treasurer		5.00
Total		$9,925.50

Explanation: The total amount forwarded to the Treasurer represents $55 in dues of delinquents in 1924, but does not include medical defense fees of $1 each for 38 members nor $107.50 representing the deficit where new members were admitted during the last half of last quarter of 1925. In other words, 1,003 members would have paid $10,030 at the regular annual dues of $10 per member, adding the $55 in delinquents' dues collected would give a grand total of $10,085. However, there is deducted $38 for non-payment of the medical defense fee, two new members paid but $5 each for the last half year dues and 13 new members, joining in the last quarter, paid but $2.50 each or a deficit of $7.50 per member, thus causing the total deduction of $107.50, leaving a total of $9,925.50.

Financial Statement

West Virginia Medical Journal, 1925

RECEIPTS

From Coop. Med. Adv. Bureau	$2,097.94
From Direct Adv. & other Sources	1,540.50
Treasurer's Check	100.00
Treasurer's Check	300.00
Balance from 1924	301.83
Total Receipts	$4,340.27

DISBURSEMENTS

Printing and Postage, Gentry Bros.:

January	$299.49	
February	301.85	
March	300.20	
April	310.96	
May	317.92	
June	320.86	
July	299.77	
August	307.26	
September	307.12	
October	308.06	
November	308.32	
December	323.46	
Total		$3,705.27

MISCELLANEOUS

April 6—Standard Printing & Publishing Co., Binding 1924 Volume	$ 3.92
June 22—Etchings for H. M. Hall paper	49.39
June 4—J. L. Melvin, refund	2.00
Jan. 30, 1926—Index for Vol. 21	22.40
Total	$77.71
Travelling Expenses	$ 198.60
Total Disbursements	3,981.58
*Balance Carried Over	358.69

*Includes accounts due and payable and cash on hand.

REPORT OF TREASURER

Charleston, W. Va., May 20, 1926.

HUGH G. NICHOLSON

In account with The West Virginia State Medical Association

			Dr.	Cr.
1925				
Jan.	1	To Balance in General Fund	$2,777.87	
Feb.	3	To Check from S. O. Neale	605.00	
	25	To Check from S. O. Neale	1,317.00	
Mch.	10	To Check from S. O. Neale	480.00	
	12	To Check from J. R. Bloss	301.83	
	25	To Check from S. O. Neale	1,368.00	
Apr.	14	To Check from S. O. Neale	731.00	
	23	To Check from S. O. Neale	1,946.00	
May	2	To Check from S. O. Neale	1,582.00	
	23	To Check from S. O. Neale	625.00	
June	8	To Check from S. O. Neale	483.00	
Sept.	1	To Check from S. O. Neale	360.00	
Jan.	16	To Check from S. O. Neale	433.50	
Jan.	8	By Check W. Va. Printing Co.		3.25
	22	By Check S. O. Neale		750.00
Feb.	7	By Check S. O. Neale		36.07
	12	By Check S. O. Neale		750.00
Mch.	5	By Check S. O. Neale		5.00
	9	By Check S. O. Neale		625.00
	13	By Check D. A. McGregor		28.71
	13	By Check W. Va. State Med Jr.		301.83
Sept.	8	By Check S. O. Neale		623.54
Oct.	14	By Check S. O. Neale		475.00
May	4	By Check S. O. Neale		491.25
	15	By Check H. G. Nicholson, Sal.		100.00
	29	By Check S. O. Neale		550.00
June	18	By Check Gen. Electric Co.		3.00
	23	By Check W. Va. State Med. Jr.		100.00
July	1	By Check S. O. Neale		525.71
July	13	By Check Miss M. Robinson		80.28
July	13	By Check D. A. McGregor		10.56
Aug.	10	By Check Prof. Relations Comm.		200.00
	10	By Check S. O. Neale		525.94
Sept.	8	By Check S. O. Neale		623.54
Oct.	14	By Check S. O. Neale		475.00
	16	By Check Miss M. Robinson		126.98
	22	By Check W. Va. State Med. Jr.		300.00
1926				
Jan.	2	By Check S. O. Neale		150.00
	16	By Check S. O. Neale		325.00
	8	By Check Patterson, Bell & Crane		10.00
	18	By Check Jas. R. Bloss (Stenog.)		300.00
	18	By Check W. Va. Publishing Co.		115.00
Feb.	18	By Check S. O. Neale		700.07
	18	By Check Med. Defense Fund		965.00
	18	By Check Indigent Fund		1,003.00
	18	By Check Balance in Fund		2,209.58
			$13,010.20	$13,010.20

MEDICAL DEFENSE FUND

1925				
Jan.	1	To Bal. in Fund	$5,560.63	
Dec.	31	To Amt. from General Fund	965.00	
Feb.	25	By Check Wm. H. File		100.00
June	10	By Check Henri P. Linsz		87.00
1926				
Feb.	9	By Check Dr. C. Bates		60.00
		Balance due Fund		6,278.63
			$6,525.63	$6,525.63

INDIGENT FUND

1925				
Jan.	1	To Balance in Fund	$5,436.00	
1926				
Jan.	26	To Amt. from General Fund	1,003.00	
		By Balance in Fund		6,439.00
			$6,439.00	$6,439.00

Charleston, W. Va., May 20, 1926.

HUGH G. NICHOLSON

In account with The West Va. State Medical Association

1926			Dr.	Cr.
Feb.		To Balance in Fund	$2,209.58	
Jan.	25	To Check from S. O. Neale	600.44	
Feb.	1	To Check from S. O. Neale	17.50	
	19	To Check from S. O. Neale	962.00	
Mch.	8	To Check from S. O. Neale	1,063.53	
Apr.	1	To Check from B. R. Winkler	50.00	
Feb.	20	By Check S. O. Neale		553.13
Mch.	8	By Check S. O. Neale		478.28
	26	By Check H. G. Nicholson, Salary		100.00
	24	By Loan B. R. Winkler		50.00
Apr.	12	Check Drs. Dunn and Ray		434.84
		To Bal. due General Fund		3,286.36
			$4,902.61	$4,902.61

REPORT OF SPECIAL COMMITTEE

Members of the Council:

Your Special Committee appointed to receive State Association funds in lieu of the State Treasurer begs to submit the following report covering the period from April 6th to May 15th, 1926:

Deposits

April 6.	Check from Executive Secretary, Membership Dues	$1,659.00
April 13.	Balance State Association Funds in Hands of Treasurer	434.84
May 3.	Check from Executive Secretary. Membership Dues	2,734.00
May 15.	Check from Executive Secretary, Membership Dues	631.00
Total funds received		$5,458.84

Disbursements

April 23.	To Executive Secretary, March office expense	$ 729.88
May 13.	To Executive Secretary, April office expense	602.95
Total		$1,332.83

Total funds received $5,458.84
Total disbursements 1,332.83

Balance on hand $4,126.01

Respectfully submitted,
C. A. RAY,
R. H. DUNN,
Special Committee.

REPORT OF THE PUBLIC POLICY AND LEGISLATIVE COMMITTEE

C. A. Ray, Chairman, Charleston.
G. A. MacQueen, Charleston.
R. H. Walker, Charleston.
James McClung, Richwood.
James R. Bloss, Huntington.
D. A. MacGregor, Wheeling.
Sterrett O. Neale, Secretary.

Continuing to function after the close of the last legislature upon theory of performing service to our membership, this committee immediately engaged in a study of the tax problems and of other matters affecting not only the profession, but the public health and welfare. There is no need to come before this assembly with facts that we all know; *i. e.*, that physicians are the real founders of every preventive measure and safeguard that have been erected to protect our boys and girls, men and women. Suffice it to say that political economists have estimated that one out of each ten laws has a bearing upon the health and welfare of our people. Thus one gets an idea of the importance of the work of this division of your association and there is a great and growing need for whole-souled cooperation from every individual in the profession, or identified with it, or who is interested in the prolongation of life to assist.

One outstanding feature of the year's work has been that there is a great need for more thorough organization work. It is imperative that every physician take an active part in the county society programs, interest himself in the economic as well as the scientific phases of the profession's activities and lend his hearty support to the cause of organized medicine. We should weld together an unbreakable chain of chilled steel opposition to all those cohorts who would tear down where our profession would build up.

Taxation

During the year, your committee assisted in the movement to secure a reduction in the war-time federal narcotic tax under Class 4, from $3.00 to $1.00 a year—the old basis. Thus, through organization a net saving of

$2.00 a year was afforded each member of the profession.

Next, your committee joined with other associations and the American Medical Association in opposition to the internal revenue commissioner's ruling that physicians must pay income taxes upon expenses incurred while taking post-graduate courses and in attendance at medical meetings. The absurdity of the ruling needs no elaboration. The physician attends his state meeting and takes up post-graduate study that he may be better equipped to serve his public—yet under the commissioner of internal revenue edict, he is taxed for doing so. It is hoped that the same success will attend the efforts along this line that was met with in the repeal of the narcotic tax. It might be wise to take this matter up with congressional candidates during the primary and general elections.

Voice has been lent to the opposition to continuance of another two years of the so-called Sheppard-Towner or Maternity Act which would prolong another branch of paternalistic government. At the time this is written, the bill extending the act for two additional years, and thus throwing further extension into the 1928 election as a snare for the woman vote, already has passed the House of Delgeates and has been reported out favorably in the Senate—except that the Senate Committee on education and labor recommended that its authority be prolonged for only one year. Sheppard-Towner has no place in our scheme of government. It is federal subsidization of state health activities. To quote from the *Journal A. M. A.* —"Those who believe that the Sheppard-Towner Act is essentially pernicious will do well, therefore, to continue their efforts to defeat any legislation looking toward the extension of the act for any period whatever. Action toward that end may accomplish its purpose, and even if it does not, it will tend to support the recommendation of the committee for a one-year extension only. Protests to be effective should be sent immediately, by telegram or special delivery, as the bill may come up for action at any time."

Your committee further has opposed and is continuing to oppose that provision of the World War Veterans' Act of 1924 which provides for an out-patient department in the Veterans' Bureau and which gives hospital, medical and surgical service to "veterans of any war, military occupation or military expedition since 1897, not dishonorably discharged and without regard to the nature or origin of their disabilities." If there ever were a law that smacked of state, or shall we say, federal medicine, here we have one. Your committee's policy is that service should be given to those whose disabilities resulted from and during the course of military service. A suggestion even has been made that the dependents of such veterans also be given free transportation, hospitalization, medical and surgical service. Think of the danger that lies ahead if such a program reaches the statute books. If the proponents of this plan are successful, approximately one-tenth of our population would be eligible for free medical, surgical and hospital service.

The fallacy of the act providing for free medical care for veterans, regardless of the origin of the ailment, is apparent. The medical profession is helping pay taxes that pay for the care that is paid these veterans in government free hospitals and free clinics. The wounded veteran, or the veteran who was stricken by disease while in the service is entitled to every service and should have it rendered unto him. But the veteran who, as a boy, had his nose broken while playing baseball, and who ten or fifteen years later takes advantage of a lenient government and has the operation performed free of cost is adding to your tax burden and is working a hardship upon the maimed and disease ridden casualties of the great conflicts.

Public Policy

One of the outstanding developments during the year has been the growing interest in the proposals to establish full-time county health units in each county of the state. Ten are now functioning and others are contemplated for the future. Your committee believes that public health work in West Virginia will take rapid strides only when the law makes it mandatory upon county courts to install these health units instead of leav-

ing the health program to the "discretion" of county commissioners. There are no boundary lines in the prevention of contagious and communicable disease and only efficient health units, manned by scientific, ethical members of the medical profession, can solve the problem and reduce the death rate from preventable disease.

Legislation

This is a campaign year. Within another eight months, new faces will appear in the seats of government at Charleston and new groups of cults and charlatans will make their bid for legislative recognition. A new legislative committee likely will formulate the program that the profession—it is hoped the united profession—will present. There are certain laws that need clarifying and more drastic penalties should be imposed upon the irregular "healer" who preys upon an unsuspecting public. Public opinion should be stimulated wherever possible in the interests of scientific medicine to the end that West Virginia shall become a happier and more healthy state in which to live.

REPORT OF COMMITTEE ON PROFESSIONAL RELATIONS

J. R. Shultz, Chairman, Charleston.
A. G. Rutherford, Welch.
H. G. Nicholson, Charleston.
W. R. Goff, Parkersburg.
H. R. Johnson, Fairmont.
Sterrett O. Neale, Sec'y, Charleston.

Your committee on professional relations formed at the 58th annual meeting in Bluefield desires at this time to make a tentative report covering activities during the first four months of 1926. The members of the Council and House of Delegates and of this association are well aware of the fact that the duties assigned to this committee are widespread and will have a far-reaching effect upon organized medicine in the years to come. Permit us, therefore, to state briefly what has been accomplished.

Meetings

An organization of this committee was held June 29, 1925, in Charleston. Members present included Drs. Nicholson, Shultz, Rutherford and Coff and the secretary. The committee perfected its organization through the selection of Dr. Shultz as chairman. At this meeting several matters were discussed, the principal one being that of an educational campaign which should be conducted through the press of the state. It was decided that fifty-two members of the association be requested to write educational publicity articles of from 750 to 1000 words, these to be released once a week throughout the year. It further was determined to investigate the feasibility of conducting an advertising campaign to awaken the public to the necessity of the payment of doctors' bills.

The secretary was instructed to see to the immediate organization of professional relations committees in the several component societies.

The second meeting was held December 6th in Charleston with Drs. Shultz, Nicholson, Goff and Johnson and the secretary present. Organization work that had preceded this meeting was checked over and approved.

The secretary was authorized to purchase samples of a certain proprietary medicine to be submitted for analysis to enable the committee to have definite information upon which to base an instructive article for the press. The results of this investigation now are familiar to all of you, the Journal of the A. M. A. exposed Psycosulphene and an article based upon the analysis submitted by the A. M. A. has been broadcast throughout West Virginia. It was ascertained that Psycosulphene contains about twenty-five cents worth of a mixture of starch, sulphur, soda and borax, and has been foisted upon the public at $3.50 per box. Your committee feels that this work has been a real contribution to the people of West Virginia.

Credit Bureau

One of the outstanding problems to the profession at large has been the collection of accounts. Accordingly, the committee authorized its chairman to try out a professional credit bureau in Charleston for a period of one year. If the plan proves feasible, likely a recommendation will be made to you at the next annual meeting.

The West Virginia Medical Journal

Directed and Edited by the Committee on Publication

[The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible]

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS:

WALTER E. VEST, Huntington — HARRY M. HALL, Wheeling — J. HOWARD ANDERSON, Marytown — C. W. WADDELL, Fairmont

MR. S. O. NEALE, *Secretary-Business Manager*, Charleston

Entered as Second Class Matter, January 1, 1926, at the Postoffice at Charleston, West Virginia

Volume XXII AUGUST : 1926 *Number 8*

GASTROTOMY FOR FOOD OVER-DISTENTION *

A. P. BUTT, M. D. *and* GUY N. CROMWELL, M D.

Davis, W. Va. *Elkins, W. Va.*

THE STOMACH is our most mercurial organ, for there is no disease to which flesh is heir that may not unfavorably affect it. We are in the habit of telling our tuberculous patients that they may be very optimistic as long as their stomachs hold out, but when the stomach fails we inform the friends to the contrary. Joy, grief and weariness, either of mind or body, usually show a stomach response. So true is this that a rather small percentage of those who come to us complaining of their stomachs have their primary trouble arising in that viscus. Nature must have thought well of the stomach inasmuch as its innervation is largely the same as that of such important organs as the heart and lungs.

Notwithstanding all of this, it is, perhaps, our most abused organ. For many years we have been firmly of the opinion that a large proportion of us dig our graves with our teeth. So securely is this fixed in our minds that we make it a point when meeting a man whose achievements are above the average to ascertain what his eating habits are. We have seen just one person, a negro, who could at will and without nausea, unload a part or all of his stomach contents—this with practically no effort. Perhaps it would have been well had nature so endowed us all.

For many years we have been enthusiastic in the use of the stomach pump but it will not always do the work. One of us remembers in his younger days using it on an office patient until he was exhausted and still the stomach was not unloaded.

The scientific physician has little patience with such terms as "acute indigestion," "summer complaint," "change of life," etc., looking upon them as "the breast works be-

* Read before the Fifty-ninth Annual Meeting of the West Virginia State Medical Association at Morgantown, May 25, 1926.

hind which ignorance skulks" but really there is perhaps a grain of truth in each such expression. When we pick up a newspaper and read of the passing of some prominent man whose sudden end is attributed to "acute indigestion," do we not jump to the conclusion that it was due to some cardiac disturbance? Are our conclusions always correct? Certainly we do know that death very frequently comes to animals from overeating. Every physician who was reared in the country can recall deaths of horses and cattle from overeating. We recall the death of two fox hounds following the ingestion of a mixture of flour and yeast prepared for bread-baking —"They swelled up and died."

Frank Turley, a well known club manager of this section, was often heard to say that he had in his younger days killed a negro, and when asked how he killed him he would reply that he and the negro had eaten an apple race and the negro died.

We are often asked why there is so much appendicitis now, so little or none years ago. We reply that there was just as much in the past but it was not recognized. To further impress this upon them we relate some cases occurring in our boyhood days and ask them if they can not recall similar cases. Thus: Old Uncle Johnnie died after eating frozen apples. Will died after drinking too much ice water in the harvest field. These cases we assure them were cases of appendicitis in all probability but were unrecognized. So they may have been; also they may have been due to a number of other causes, such as perforating ulcer of the stomach or duodenum, eating unsound food, etc. However might they not have been from overeating alone? May not men as well as animals die from the ingestion of too much food? The case we report was before, and has been since, well in every way, the cabbage was eaten by nine others and the apples were being eaten by the school children.

Why should man and animals die from an overloaded stomach? This we shall leave to the physiologist and the pathologist but it seems to us the action of the vagi might well account for it.

Patient, Walter Sines, white, male, aged 19, well developed. Father, mother and seven brothers and sisters living and well. The family physician says the entire family are enormous eaters. Until the age of eight he suffered from "stomach trouble," none since. Patient was carried into our office at 11:30 Sunday morning, November 15, 1925. The previous day he had been entirely well, remembered he had eaten beans at noon, and frozen apples just before his five o'clock supper, which consisted mainly of cabbage. At seven Saturday evening he began to have pain, vomited, could not sleep. His mother gave him a dose of magnesium sulphate which he says acted. His physician, Dr. Danford of Kempton, Md., was called Sunday morning. Realizing the gravity of the case he brought him at once to the hospital, remarking, as he entered the door, "I have brought you a very sick man; I do not know what diagnosis to make."

Patient seemed in extremis. He was cold, almost pulseless, collapsed and in an extreme degree of shock. The temperature was 96 and the pulse was irregular and could not be counted. He vomited a small amount of reddish fluid twice before operation. As he lay on the office table two distinct impressions were made: first, that he was an extremely sick man; second, that the condition was one with which we were not familiar. His upper abdomen was much distended, mainly to the left, reminding one of a five or six months pregnancy except as to position. With the diagnosis of "acute abdomen" he was sent to bed and preparations made for an immediate operation. While this was being done a nurse of very considerable surgical experience and more than ordinary prognostic ability reported him in an inoperable condition, in fact, dying. He was once more examined and for a while we were inclined to share her views. The mother was informed that the case seemed hopeless, that he was probably too near death for any kind of an operation. Upon further reflection we determined to operate or not to operate, solely on his answer to the question, "Do you have pain?" He answered in the affirmative and on this answer alone we based our determination to operate.

The abdomen was opened under ether anesthesia, the presenting part had the appear-

ance and feel of an ovarian cyst. Recognizing it as an enormously distended stomach, an ordinary sized stomach tube was introduced through the mouth and an effort was made to empty it. Considerable fluid was withdrawn but not enough to make any impression on the size of the mass. It was suggested by one of us that it was largely gaseous distention. Percussion did not bear this out; also the fact that we were ineffectually trying to assist the action of the tube by pressure with both hands made this seem unlikely.

An incision was made through the exceedingly thin-walled stomach, scarcely a drop of blood appeared nor was there the least contraction of the walls until the stomach was emptied. By means of pressure with both hands and the use of a tablespoon the stomach was finally unloaded. No examination was made of the stomach contents but we do not remember seeing anything other than apples and cabbage. There was no odor, and no signs of digestion. There had been little or no mastication and the pieces of cabbage and apple were so large that by no possibility could they have passed through any stomach tube.

We exceedingly regret that the stomach contents were not measured. The case seemed so utterly hopeless that many things were omitted that otherwise would have been attended to. Some of the contents was lost, but most of it was caught in a small copper sterilizer measuring nine by eighteen and three fourths inches. Several days later, when it seemed that the patient would recover, three nurses who were present during the operation were directed to fill the sterilizer with water to the same depth as the stomach contents had occupied, then to measure the water. This being done, it was found to measure five quarts. Please note that neither of us had anything to do with the measurement. These nurses saw the contents in the sterilizer and emptied it.

The abdomen was closed without drainage. Convalescence was stormy for forty-eight hours. The patient was discharged from hospital on December 2nd in excellent condition. Three months after operation he reports himself as being in perfect health.

Prior's service was able to furnish us with but one case in which operation had been performed for the express purpose of emptying the stomach. From many points of similarity it seems worth a partial report. The case was reported in the *British Medical Journal*, March 25, 1911, by Farquar, G. G., Surgeon, John Hartley. "Nearly all of the recorded cases of acute dilatation are alike in obscurity of cause and fatality of termination. A girl, aged 23, was advised to eat figs to burst a small abscess in axillae. She ate nearly a pound of dried figs. Two hours later ineffectual retching set in with abdominal pain. Twenty-two hours after ingestion, the physician was called. The abdomen was not distended, moved slightly with respiration. After examination she sat up with a sudden cry and gasped for breath, pupils dilated, and for about ten seconds she looked as if she might fall back dead. Twenty-six hours after onset of pain she felt no better although enema had acted well. The abdomen hardly moved on respiration and was distended, especially in the epigastric and left iliac regions, which were dull. A uniformly tympanitic note was elicited from the ensiform cartilage to a point well below the umbilicus. The stomach resonance extends up to the nipple. Thirty-one hours after ingestion of the figs the abdomen was opened. A large swelling like an ovarian cyst presented in the wound. It was tympanitic above, dull below and filled the whole front of the abdomen. It was recognized as an enormously distended stomach, the greater curvature being hidden below the pubis, and the lesser curvature appearing like a vertical chink, between the inflated halves of the organ. The dilatation seemed to extend to the second stage of the duodenum."

The report states that a small incision was first made to allow the gas to escape, then a larger through which the half masticated foods having a strong vinous odor were removed with a scoop. The pylorous and first part of duodenum being dilated sufficiently to admit three fingers. "Looking back on this case one wonders how the branches of the vagi in the stomach could recover. Some of these must have been stretched to three times their usual length. Is it not possible that this may account for the dyspnea?"

Wounds were sutured without drainage. Recovery.

Dr. Franklin Martin writes me as follows: "We are enclosing some references which may be of some interest to you in connection with your request for information dealing with gastrotomy for food overdistention. In all of these cases dilatation was caused by food, but in no case was gastrotomy performed. The indices from 1892 up to the present time were checked for material in point, and nothing was found bearing directly on your subject, there may be additional material in articles under titles which do not indicate if dilatation of the stomach was due to food overdistention."

You will note that in the case reported by Farquar the appearance, as in ours, was that of an ovarian cyst, the distention in his case was largely due to gas, in ours there was no gas. The presence of gas in the Farquar case accounted for the extreme dyspnea.

We disclaim any intention of starting our operation with the expectation of doing a gastrotomy, we made only the diagnosis of acute abdomen.

Let us again proclaim unyielding opposition to too much diagnosis; away with it! In our practice two brothers have died from perforating duodenal ulcer because they waited too long for an exact diagnosis which their physician wisely refused to give them. At the very time the last one died a physician who cares little for diagnostic minutae, but is loaded down with horse sense, was called to a remote mountain home in the early spring when the roads were almost impassable. He hit his patient one sharp percussion stroke, diagnosed an "acute abdomen," loaded him in his Ford and hauled him over the mountains and streams arriving at the hospital at 2 A. M. Operation disclosed a perforated duodenal ulcer, and the patient is living and well today BECAUSE his physician did not try to make an exact diagnosis. The patient whose history I am reporting is alive because we did not make a diagnosis. Yet the very latest addition to our library, "Pitfalls of Surgery," stresses exact diagnosis, barium meals, etc. Not so very many years ago I sat in a meeting of the A. M. A. and heard a man of national note read a paper on gun shot wounds of the abdomen. He advised waiting for signs. Signs of what? Peritonitis of course. Here in West Virginia, where the feudist, the striker, the Mafia and the bootlegger hold forth, When I am confronted with "The patient MIGHT have been shot in the abdomen," I let "the aseptic scalpel" (apologies to Deaver) decide whether he HAS BEEN SHOT IN THE ABDOMEN I never saw it do a particle of harm and I have seen it do much good.

CONCLUSIONS

(1) Man as well as the lowest animals can die from overeating.

(2) A very few hours of ineffectual, medical treatment should be followed by operation.

(3) Even though apparently moribund, a patient still in possession of pain sense should not be regarded as hopeless.

DISCUSSION

DR. E. BENNETTE HENSON, Charleston:

When I was asked to discuss this paper I wrote to Dr. Butt for a synopsis of the case, because I did not know what he was going to talk about. I had never heard of opening up the abdomen for the relief of an overdistended stomach.

There are several points to be brought out in the discussion of this paper. We could enter into the chemistry of foods. We mountaineers know quite a good deal about cracked corn and water and other ingredients that enter into the making of moonshine. This man evidently decided to make his own. The older doctors all recall that apples and cabbage are not tolerated by gall-bladder cases. I have checked up on that, and found that many of my gall-bladder patients say that they can not tolerate cabbage, and apples gave them a good deal of gas. This patient seems to demonstrate the faulty opening of the pylorus seen in such cases.

The pacemaker of the whole intestinal tract is situated in the cardiac end of the stomach. This man's distended stomach evidently crowded his pacemaker, and it failed to act. Dr. Butt, I think, is to be congratulated on offering this patient surgery. I think if this man had gone to some

of the larger clinics he would be in his grave today. Dr. Butt, I think, has done well in bringing out the fact that if a man can put his finger on the painful point in his abdomen it is not too late to operate. There is one question I want to ask Dr. Butt; that is, if he had passed a duodenal tube into the stomach after the operation, would not that have aided in the convalescence?

DR. BUTT, closing:

The case, after the first day, was under the charge of Dr. Cromwell entirely, and I do not know whether he did or not use the duodenal tube. I have not been as fortunate as some in the use of it. I have always tried to use it through the mouth, while I have learned recently that it is also used through the nose. I have heard of people who have been able to get that tube to stay in for days, but I am not so succesfsul in the use of it.

THE DIFFERENTIAL DIAGNOSIS OF ANGINA PECTORIS *

By OSCAR B. BIERN, M. D.
Huntington, W. Va.

DURING the past few years there has been an unusual interest shown by the medical profession, and even by the laity, in the problem of Angina Pectoris and coronary disease. The cause of this unusual interest is two-fold. In the first place the medical profession has become more aware of the fact that heart disease in its various aspects is now the most important cause of death and morbidity with which we have to deal. This state of affairs is being emphasized through medical literature, and by means of the lay press. It is gradually dawning on physicians that Angina Pectoris is a very common condition, is frequently overlooked or misdiagnosed, and is the cause of many fatalities that previously were not understood. In the second place, since the introduction by Jonnesco of surgical procedures that have attempted to relieve attacks of angina, the problem is no longer limited to the internist, but surgeons throughout the world have now become more familiar with this cardiac disorder and have been trying to select the proper patients for cervical sympathectomy, which undoubtedly has proven of great value to the small number of patients that have come to operation.

This disease was first described by Heberden in 1768 though the first record of the symptoms of a grave cardiac disorder was given by the Earl of Clarendon in 1632, in which he describes the attacks and death of his father. It might be of some interest to give Heberden's classical description of the disease that he named and to compare the symptoms as originally described with the disease as we know it today: "There is a disorder of the breast, marked with strong and peculiar symptoms, considerable for the kind of danger belonging to it. The seat of it, (the pain), and sense of strangling and anxiety with which it is attended may make it not improperly be called Angina Pectoris. Those who are afflicted with it are seized while they are walking, and more particularly when they walk soon after eating, with a painful and most disagreeable sensation in the breast, which seems as though it would take their life away if it were to increase or continue, the moment they stand still all the uneasiness disappears. In all other respects the patients are at the beginning of this disorder perfectly well, and, in particular have no shortness of breath, from which it is totally different." This classical description as given has not been changed in all these years, but only elaborated, which to my mind is a great tribute to all those medical pioneers who have made modern medicine as practiced today, possible.

* Read before the Fifty-ninth Annual Meeting of the West Virginia State Medical Association at Morgantown, May 25, 1926.

Angina Pectoris is rare under the age of twenty and it seems to occur with increasing frequency up to the fifth decade when again there is a gradual decline. Angina is a disease that strikes down men in the prime of life and it is much more frequently seen in private and consulting practice than in the wards or out-patient departments of our hospitals. It occurs more frequently in those classes who use their brains rather than their hands, and in those individuals who work at high pressure, eat too liberally of rich foods and employ their so-called "leisure" hours in diversions more exacting than their occupations. It is interesting to note that Angina Pectoris numbers among its victims, many physicians, most notable among whom were John Hunter and Sir James Mackenzie. The apparently increasing prevalence of angina is the result of the increased strain of modern business and professional life, and it is possible that the disease will be encountered more frequently in the future as with better hygiene and sanitation the lives of more people are prolonged beyond middle life.

Though there is frequently no warning of the onset of an attack of angina yet in many cases inquiry will elicit a history of shortness of breath and a sense of uneasiness of the chest that has been present for some time. It can also be ascertained that this shortness of breath or uneasiness occurs most frequently when walking up a slight grade and especially after meals or walking against the wind on a cold day. The pain of the attack is sharp and agonizing and may be accompanied by a sense of impending death. The patient is as a rule transfixed by the seizure, he is extremely pale and the face and hands are bathed with a cold perspiration. The seat of the pain is usually over the sternum at about the level of the third or fourth costal cartilage and is often accompanied by a sense of constriction of the chest. The pain is often transmitted down the arms, the left more often than the right. Very frequently the patient will complain of a severe neuralgia in the region of the elbows and along the ulnar side of the hand. At times the neuralgia may be brought on by exertion not accompanied by pain in the chest. The pain is sometimes referred to the back and to the abdomen and occasionally to the neck and lower jaw. A case was seen one week ago during the convention held in this city of the traffic managers of the various railroads, where the patient had had frequent attacks of pain as described together with radiation to the lower jaw for which he had all his lower teeth removed. The pain in the arm was diagnosed as rheumatism.

That so many of the attacks of angina are followed by nausea and vomiting and by the passing of large quantities of gas that seems to afford some relief to the patient, and with frequent radiation of pain to the abdomen makes this grave heart disease to be submerged under a diagnosis of gallstone colic or acute indigestion. This latter diagnosis is perhaps given the patient by his physician and may explain why our daily newspapers with great frequency attribute the death of people and especially notables to "acute indigestion", a condition which as a cause of death I question. I feel very sure that if a post-mortem could be done evidence of grave cardiac disease would be found and not gastric pathology. Certainly most of them fall in the age group of most frequent incidence of cardiac disease and it would be strange indeed for acute indigestion to be fatal to those over forty while sparing those under that age.

The anginal seizure may last for a minute or so to several hours. If the pain persists after a liberal dose of morphine coronary thrombosis must always be thought of. The physical signs of this disease either during the attack or in an interval may not reveal any evidence of heart disease. The pulse rate as a rule remains normal and I personally have never seen a case of angina with an irregular or rapid pulse. The blood pressure may show a rise of from 20 to 30 mm. of mercury over the patient's usual normal, but in one of the worst cases of angina I have ever seen the pressure remained absolutely normal during an attack lasting two hours. On auscultation over the heart the only abnormality that I can detect with certainty is a certain faintness of the heart sounds that can best be described as if the bell of your stethoscope were plugged. Many observers mention a certain tynoanitic quality of the

aortic second that is usually associated with an aortic plaque, but I can only say that I have only found this sign in one case.

The radial vessels may or may not be thickened. During the attack and even following it for a few days, there is as a rule definite hyperasthesia of the pectoral muscle, which occasionally extends to the elbow or wrist of the affected side. This I believe to be of great diagnostic import for I have never seen this in association with any other disease. The severity of the pain is no criterion of the degree of heart damage, and one who complains of only mild sternal distress may be dead within a week. The prognosis depends rather on your estimate of the degree of coronary occlusion than on the degree and character of the pain.

With this brief description of a typical attack of angina, I call your attention to that condition with which angina is more frequently confounded than with perhaps any other disease, namely coronary thrombosis. Why this confusion should exist is not apparent as I have personal knowledge of at least 117 articles dealing with the diagnosis of this condition, that have been published in the past three years. Contrast the following train of symptoms with the ones given above. Picture a man of fifty or over, strong and muscular, well for many years who has previously complained of a little tightness in the chest on exertion. Either after some effort like walking on a golf course, or even while lying quietly in bed, he is taken with a severe attack of pain in the center of his chest, crushing in character and either with or without the customary radiation. He becomes prostrated and may actually faint but is more apt to be in a state of moderate collapse. His face becomes ashen and pale and there is a cold clammy sweat. The customary relief that he had received from the nitrites is wanting and morphine even in very large doses has little or no effect. One patient seen two years ago was given over two grains in less than an hour with no relief, chloroform being used as a last resort with some benefit. The pain instead of lasting minutes lasts hours and days. If the previous blood pressure was known it will be found to be very low and in the case just mentioned there was a drop from 180 to 90 in about two hours' time. Instead of the normal or slow pulse of angina the rate will be found to be markedly accelerated even as high as 140. Irregularities are frequent and in listening over the heart the first sound is barely audible and the heart has a tic-tac quality with many extra systoles. The lungs generally show showers of fine rales at the bases and at times borders on pulmonary edema. To complete this contrasting picture there is generally fever of 100 to 101 and a leucocytosis of from 15,000 to 30,000. The liver is often engorged and there may be a slight icteric tint to the conjunctiva and skin. This is the type of case that so often resembles the surgical abdomen and I have a person now under my care that underwent an operation in a large medical center for an attack as just described, with a diagnosis of gall-stone colic. No stones were found at operation.

Some other conditions with which angina may be confounded are, syphilitic aortitis, aneurysm of the aorta, mediastinal tumors, tumors of the spinal cord, caries of the dorsal vertebrae, pericarditis, pleurisy and in nervous patients the vaso-vagal attacks described by Gowers. It is not necessary to consider most of the above conditions in detail as a careful history and physical examination supplemented by roentgenograms of the chest and spine will serve to exclude them. The differentiation from an attack of gall-stone colic is very easy in typical cases of either, but if it will be remembered that in certain cases of gallstones the pain is referred to the chest and in certain cases of angina the pain is referred to the abdomen; that both are accompanied by belching, and maybe vomiting, the history alone will be the deciding factor. Occasionally the two conditions may coexist. The vaso-vagal attacks of Gowers or pseudo angina generally occur in people under the age of fifty, more often in women with a nervous or hysterical tendency. The attacks are characterized by pain in the region of the heart accompanied by difficulty in breathing and by indefinite gastric symptoms. These attacks apparently have no relation to true angina pectoris. The pulse is indicative of vaso-motor spasms and there is pallor, and cold extremities and shivering

which at times amounts to a chill. Between the attacks the nervous or hysterical nature of the attacks of respiratory distress is shown by the long drawn or sighing inspiration as if there were great difficulty in getting enough air into the chest.

The treatment of these conditions just described is beyond the scope of this paper, but I can not leave the subject without mentioning the surgical treatment of cervical sympathectomy. Within the past five years following the publication of a paper by Jonnesco there has been a gradually increasing literature regarding this procedure. The relief that is obtained by this simple surgical act is as striking as the pain from which they suffer. The main contraindication to this operation is coronary occlusion. It should be borne in mind that this procedure in no way changes the underlying pathology and that patients should be warned that after sympathectomy the main danger signal of pain is now absent and that they must be more than careful in doing the things that were previously known to produce an attack.

I have had three patients who have undergone this operation. One died two weeks after the operation on the day he was to return home, presumably from an embolus, but as no autopsy was performed the exact nature will go undetermined. Two are living after two and three years respectively with no recurrence of the anginal pain, but one had pain in his left arm on exertion. The last patient blows a cornet in a local orchestra, works daily and last Labor Day walked over three miles in a parade.

DISCUSSION

DR. D. A. MACGREGOR, Wheeling:

It is indeed a pleasure to discuss such a scholarly paper as that to which we have just listened. It is unfortunate that the way in which Dr. Biern has covered his subject leaves very little for us to talk about.

I have been very much interested in the reports of cervical sympathectomy. Personally, having had no experience with it, I cannot discuss its merits, but it does strike me that it has been received in the successful cases most gratefully by those people who have suffered from this anginal pain. Anginal pain is perhaps the most anguishing pain we know of, and to relieve it by surgery is an achievement of the highest rank. After this operation we find a very unusual situation. The patient continues to have the disease without the warning symptom of pain, but the freedom from attacks is worth any price the patient pays.

The most striking thing in the paper, as Dr. Biern presented it, is the enumeration of those things which are extra-cardiac which may be confounded with angina pectoris. He spent considerable time on gall-bladder disease and pseudo-anginal attacks. It occurred to me that I might go over the common forms of pain referred to the heart which do not originate in another viscus. We so often have patients who complain of heart trouble and we wonder what heart trouble the patient has. The first form we might consider is the attack of pain about the heart in the nervous patient, the effort syndrome. The next form is the fatigue pain with valvular lesions. Next comes aortic pain. Luetic aortitis is the best example. Outside of the heart proper we have pericardial pain. Finally there are the two classifications that are most commonly confused, and upon which Dr. Biern elaborated at great length; first, coronary thrombosis, which should never be confused with the true anginal or spasmodic attacks; and true angina. These six groups cover the ordinary cardiac pains. Almost any cardiac pain can be classified under one of these heads. The most difficult distinction, perhaps, is between the last two. Dr. Biern spoke of that. Emphasizing it further, let me say that coronary thrombosis comes on without apparent cause, when the patient is asleep, perhaps, or lying down. Furthermore, when it comes, it comes to stay; it lasts for hours or days perhaps. It is intense pain. It does not yield to ordinary nitrite medication. Huge doses of morphine are required to do any good, and then it does not always yield to that. Another point of difference is that coronary thrombosis usually leaves a permanent impairment of the heart due to the disturbance in coronary circulation, and results in a marked and permanent lowering of the blood pressure.

DR. A. H. HOGE, Bluefield:

I certainly want to thank Dr. Biern for bringing out this subject so thoroughly. I hardly know how to discuss it. I do not think it is possible for anyone to bring out anything new, as he so well illustrated, since the original classic description. I do feel, however, that a lot of us are making errors in diagnosis as a result of the impressionable age at which we went through medical college, and think of angina pectoris as such a well-defined thing, and one with such classical symptoms, the pallor, the intense pain, etc. I think some of these cases are really insidious, and it is in those cases that we have the opportunity of doing the best good to our patients. A lot of them report that they get up in the morning feeling fine, work hard all day, and frequently in the afternoon, or after their evening meal, after slight exertion, after walking up a grade, etc., have slight dizziness. . If they stop walking this dizziness disappears, but often comes on again if walking is resumed. Others have a fullness in the epigastrium. Others have some pain in the arm; some, severe pain in the elbow; some, in the wrist. There are cases reported early in which there was no other symptom than severe pain in one or two fingers, brought on by walking early after a heavy meal. I feel that if we can keep in mind these early symptoms we can help our patients, for unless the surgeons come to our aid there is comparatively little we can do in the later stages. So far as I am concerned, the surgeons may have my cases.

DR. CHARLES O'GRADY, Charleston:

I enjoyed Dr. Biern's paper very much indeed. I think it is a splendid paper, and I do not think there is any paper that the society could have that would be of more interest to internists. I believe that many cases of so-called acute indigestion that die are cases of angina pectoris. The principal symptom that I have always found with it is the fear of death. Whenever they have that fear of death they have an angina pectoris. That is the principal thing. It does not matter what they are doing; they will stop if they are getting on a street car, or getting into an automobile, or getting in an elevator; they will stop. It is going to hold them. Those two things I have always noticed. I think it is something that most internists see occasionally. I do not know that it is so very frequent, although I have had the privilege of seeing three cases recently. Two of them are dead. They always die ultimately; frequently soon. They may die in the first attack. They frequently have high blood pressure and sclerosed coronary arteries. Dr. Braun of Vienna, in reporting a series of 127 cases, Journal A. M. A., May 22, 1926, did postmortems on all of them, and he said the left coronary artery was sclerosed in all. I was much surprised to hear Dr. Biern say that Sir James MacKenzie had this disease. I remember meeting him years ago in Toronto, at a meeting of the British medical association. He was not Sir James then, but was attracting attention. He had not then gone to London, but was living in the north of England. He was doing general practice; all kinds of cases, including obstetrical work, and was studying the heart in obstetrical cases. Dr. MacKenzie was holding up clinical medicine against all the world. He had a fight at that meeting with the bacteriologists. He said they could tell one bacteria from another, but could not tell what the bacteriae did. He said they said one bacteria was fatal, but was not fatal in all the cases. Evidently he was a good bacteriologist, for I noted that many men who were distinguished bacteriologists said afterwards that Dr. MacKenzie knew a good deal about it.

DR. H. G. STEELE, Bluefield:

There is one question I want to ask Dr. Biern. That is, was this patient to whom he gave two grains of morphine within an hour an addict or an alcoholic, or is that the usual dose? I am not very familiar with it.

DR. BIERN, closing the discussion:

I want to thank the gentlemen who have discussed this paper for their discussions.

Answering Dr. Steele's question, I never have any set dose. I give a dose that will give the effect, whether it be one grain or four or six or eight. That patient was neither an addict nor an alcoholic. I learned that during the war, and I never have a set

dose of any drug, but use enough to get the effect.

Dr. O'Grady reported the pathological changes as found by a German observer. That has not been confirmed in this country. One patient with slight angina may have complete occlusion of the left coronary artery; some may be syphilitic; some rheumatic. Many have no pathology whatever. Some have gall-bladder pathology, but whether the pathology in the gall-bladder or the liver has any definite effect on angina, I cannot say.

If you find a rapid pulse, and if you find fever and leucocytosis, and if you hear murmurs, you have not angina at all; you have something else. The biggest point about angina is that you have no constant physical findings.

REPORT OF AN OTOLOGICAL CASE *

By H. R. JOHNSON, M. D.
Fairmont, W. Va.

IN THE PREPARATION of this paper the writer has made no attempt to make an academic contribution to medical literature, but has confined his efforts to reporting a clinical case occurring in his practice, presenting obstacles and difficulties in diagnosis and treatment, such as have or may confront anyone engaged in Otologic practice. This case presents a few interesting features which should bring out a discussion that will be helpful to all of us in future management of similar cases.

My case is one of Sigmoid Sinus Thrombosis. The diagnosis, of Sinus Thrombosis, where all the classical symptoms are present is comparatively easy. Given a case, beginning with suppuration of middle ear, followed by mastoid involvement with chills, wide excursions of temperature, sweats, moderate leucocytosis and blood culture showing positive bacteremia, the diagnosis is readily made and surgical indications clear cut. Unfortunately all cases do not conform to this picture, many cases are vague, leaving the surgeon in serious doubt as to diagnosis, and uncertain as to the proper procedure.

Case Report: Ruth P., age 14. Was first called to see her on evening of February 16, 1923, in consultation with Dr. Joe Yost, and found her suffering with intense pain in both ears.

Past history: Had measles eight years ago. Menstruation established one year, regular but always had fullness and roaring in ears during her periods. Otherwise had always enjoyed perfect health. Father and mother both living and in good health. One sister, age sixteen, and two brothers, age eighteen and twenty, all in good health.

Present illness began the day before I was called, with severe pain in both ears, radiating over both sides of the head. This was preceded by a chill lasting for one hour.

Physical examination: Strong, vigorous girl, fully developed and large for her age. Nose showed slight turgescense of the middle and inferior turbinates on both sides. Nasopharynx, smooth, clean and congested; mouth of each Eustachian tube swollen; tonsils were small, not adherent, congested but no evidence of cryptic infection present; pharynx granular and red; cervical glands were both palpable; both ears presented typical pictures of Acute Suppurative Otitis Media. Tympanic membranes were red, thickened and slightly bulging; no tenderness over either mastoid. She was menstruating at this time. A careful examination failed to find any other trouble. Temperature at this time was 105; pulse 120. Both drums were freely incised followed by free hemorrhage but no pus. At

*Read before he Eye, Ear, Nose and Throat Section of the West Virginia State Medical Association at Morgantown, May 26, 1926.

no time during her trouble was there the slightest discharge of pus—the ears remaining absolutely dry.

The pain after myringotomy continued almost, if not quite as severe as before but temperature, on morning following was 101 2/5. This however, was of short duration, as she had another chill and temperature jumped again to 105, followed by a sweat. On February 17, she was admitted to hospital and was again gone over very thoroughly and nothing other than the ears could be found.

The laboratory findings were as follows: Blood examination: leucocyte count 14,400; polymorphs 85%; lymphocytes 16; large mononuclear 1% transitional 1% unclassified 5%. Culture of blood taken at crest of temperature wave was positive for Streptococcus Hemolyticus. Urine: albumen faint trace, no sugar, large and small hyaline and granular casts and many pus cells. Temperature on morning of admission 102 3/5; pulse 120; dropping to 97 4/5 in afternoon—both ears perfectly dry. February 19, had another severe chill and temperature shot up immediately to 105; pulse 120. Leucocyte count 4,200.

An X-ray picture taken at this time showed slight increase in density of both mastoids. Nothing to indicate breaking down of cellular structure. At 9:00 on the evening of February 19, she was taken to operating room for mastoid operation (notwithstanding X-ray showed practically nothing and no tenderness over mastoids), for purpose of exposing and investigating the sigmoid sinus. Now the question arose, which side to open up; as both were equally involved, Crowe's method of compression of internal jugular and watching if the superficial veins of temple or the central retinal vein would become enlarged was tried, with negative results. As she complained more of the right side, it was decided to operate on this side first. On making ample mastoid incision down to the bone with free exposure, the bone looked healthy. On opening into the antrum, with exception of very slight hyperemia, no pathology was found in the mastoids. The bone overlying sigmoid sinus was freely exposed and looked firm and healthy. This was removed carefully with ronguers exposing the sinus from the knee downward for about one inch. The sinus looked of normal healthy color and on compression showed the usual elasticity of normal vein. A needle inserted, showed it contained fluid blood. In view of these findings, the operation was stopped and the same thing was done on left side and exactly same condition was found. Nothing further was done as I wanted consultation before going further.

On February 20, the morning following the operation, temperature was 97 4/5; pulse, 80; leucocyte count 6800. Same afternoon temperature went to 101 4/5; pulse 120; with severe pain on both ears and the side of the head.

On morning of February 21, temperature 99 2/5; in afternoon had chill with temperature rapidly rising to 103 2/5; leucocyte count 9500. At this time we had Dr. E. W. Day of Pittsburgh in consultation and it was decided to open the sigmoid on right side. This was done and had free flow of blood coming from both above and below. Nothing further was done.

The sigmoid on left side was incised and got free hemorrhage from above and below. Nothing further was done. Dressing applied and patient sent to her room.

February 23, patient very restless, temperature 103; pulse 120; dropping in afternoon to 97 1/5.

February 24 (A. M.) Temperature 103; pulse 120; no chills. Blood taken at height still showed on culture, streptococcus hemolyticus. Again temperature dropped to normal, remained so until afternoon of February 25th, when it suddenly went up to 103; pulse 120. On February 26, morning temperature, afternoon temperature 101; pulse 90; patient more comfortable. From this time on temperature ran with slight variations, until March 30, when it reached normal and remained so until her discharge on March 22. At this time blood culture negative. She made complete recovery and has remained so.

Now the question arises: Did this patient have a sinus thrombosis? She had all the symptoms to justify the diagnosis, and the operative procedure, but the findings were not what we had reason to expect. The writer must confess that he is still in doubt

as to whether she may not have had a small parietal clot in one or the other sigmoid sinus, or whether the finding of casts and pus cells in urine might not have meant pyelitis, with a blood stream infection. This is one point the writer wishes discussed

Another dilemma in which we find ourselves in cases of bilateral involvement of equal intensity, is whether we have a thrombosis on one or the other side or on both sides. Any procedure that will help to clear up such a situation will mark an advance in the management of these cases. Crowe, some few years ago, claimed that pressure on the internal jugular veins would cause an engorgement of the superficial veins of this same side and also of the central vein of the retina, if the sinus was free, but if it contained an obstructing thrombus, no engorgement would take place. Tobey and Ayers of Boston have reported in full, in the July, 1925 number of *Archives of Otolaryngology*, an ingenious test for the presence of an obstructing thrombus in the sigmoid sinus.

This test is based on the experimentally proved fact that compression of an internal jugular vein will cause increased pressure of cerebro-spinal fluid on lumbar puncture. With your permission I will quote them in their description of this test:

"With the patient in the lateral position lumbar puncture is performed and the fluid is allowed to run into a glass manometer of 2 m.m. bore. The initial pressure reading is noted; also the pulse and respiration oscillations, as evidence of patency of Manometric System.

"Now without in any way disturbing the patient an assistant makes gentle pressure on side of neck between larynx and sterno-cleido-mastoid muscle until he feels a strong carotid arterial pulsation. During the compression, the operator watches the rapidity of the rise of fluid in manometer, the promptness of its beginning and the height to which it attains and on release of jugular compression, the rapidity in drop of pressure. The procedure is repeated on the opposite side of the neck and then for comparison both sides are compressed simultaneously.

"In a typical case of sinus thrombosis, there is a prompt and rapid rise in fluid pressure to two or three times the initial pressure, when the jugular draining the normal sinus is compressed. The pressure rise is maximal, being equal to pressure on both sides. Pressure on the side with sinus thrombosis causes no rise in pressure or more commonly a slow rise of only 10-20 in the manometer."

This seems a logical procedure—based on the dynamics of the cerebro-spinal fluid and should prove a valuable contribution to our resources in these preplexing and problematic cases. This test however, in the case under consideration, would, it seems to me, have been negative, for thrombosis, as there was no obstruction in either sigmoid sinus.

DISCUSSION

DR. MCCARTHY: Dr. Johnson's paper is an exceedingly clear description of such case as I encountered some time ago, and which I think, added a few gray hairs to my head. The cases are almost identical except there was a little discharge from the ears in my case. I did about the same thing that Dr. Johnson did and found that the sigmoid sinus was in good condition; it was not opened. But in another case which I had about three years previous to that upon opening the sigmoid sinus, a tiny clot of blood was thrown out and the sigmoid sinus was allowed to bleed. It seemed rather a foolish thing to do at the time and there was considerable discussion as to whether or not it should be done, and the clot thrown out seemed not so much a sinus clot, as a clot of the lymph. I think Dr. Johnson's position is perfectly correct in feeling that he was dealing with sinus thrombosis.

EARLY DIAGNOSIS AND TREATMENT OF ACUTE PURULENT OTITIS MEDIA *

By IVAN FAWCETT, M. D.
Wheeling, W. Va.

IT IS INVARIABLY conceded that an early diagnosis of acute suppurative otitis media is desirable (1) to preserve hearing; (2) to prevent chronicity; and (3) to lessen the incidence of mastoid involvement.

Early diagnosis is dependent upon routine examination of the ear by the general practitioner, since he sees these cases first, especially in children with gastro-intestinal symptoms, obscure fever, meningeal irritation, or during dentition, usually with an entire absence of symptoms referable to the ear.

Such an examination was impractical in the old days due to the difficulty of using the head mirror with the varying sources of light available; the ordinary ear speculum through which the light had to be condensed and reflected; the necessity of changing the position of the light or of the patient when viewing the second ear, plus the usual obstacles ever present in the sick room and missing in our own offices.

With the advent of the electrically lighted magnifying otoscope, these examinations are easily and readily made. The initial cost of the instrument is small; its upkeep is trifling as the batteries and common flash light bulbs used are replaceable at small cost in any drug store, auto accessory or hardware store; it takes up but little room in the bag; and one can learn to distinguish the more common types of acute middle ear diseases with relative ease.

The otolaryngologist can help materially to make such examinations routine by demonstrating the simplicity of the otoscope and encouraging its use by those with whom he comes in contact and with whom he sees patients in consultation. This is especially true of the men in teaching positions who should stress the importance of the otoscope in the hands of the family physician.

In a paper read by me before the Ohio County Mediical Society twelve years ago, this routine otoscopic examination was urged. The doctors of Wheeling have cooperated to such an extent that practically all of them carry an otoscope as part of their regular equipment. Their attitude is expressed by one of them who said that he would as soon think of making a visit to a sick child without a stethoscope as without an otoscope. The result as seen by the specialist is in the steadily diminishing number of cases of chronic purulent otitis media seen during the past ten years even though acute otitis media has been much more prevalent during that time than in the previous decade.

Many hitherto unsuspected cases of ear involvements are disclosed in the gastrointestinal upsets in infants. These cases frequently have been found to be aggravated by, or in many instances, directly due to the presence of a middle ear infection with tubal drainage only. Following incision of the drum and antiseptic treatment of the nasopharynx many of these cases have cleared up after resisting all previous treatment directed to the gastro-intestinal conditon itself.

Otitis media has been observed in a number of cases of pneumonia devoid of pain or other symptoms referable to the ear. In three such cases (one adult and two infants), I believe that the recognition of the otitis media and the treatment by incision and drainage decided the issue in favor of the patients, all of whom were desperately ill. The otoscopic findings in these pneumonia patients have been unusual, presenting a sub-

* Read before the Eye, Ear, Nose and Throat Section of the West Virginia State Medical Association at Morgantown, May 26, 1926.

acute condition with uniform bulging of the entire drum; absence of the cone of light; the umbo at the bottom of a pit like depression; a grayish opaque appearance; and a total absence of any distended vessels or of inflammatory reactions of any kind, similar to those cases seen in streptococcus mucosus infections following tonsillar involvement. These three cases in my own experience have led me to wonder in how many fatal cases of pneumonia an unsuspected middle ear infection may have been the deciding factor.

The treatment of otitis media, suppurative, acute, consists of (1) Incision of the drum, with removal of secretion from the canal and followed by massage of the drum to open the Eustachian tube and irrigation when indicated. (2) Astringent and antiseptic treatment of the nose and nasopharynx.

For the myringotomy, general anasthesia is used in all patients over two years of age, when not contraindicated, nitrous oxide or primary ether being preferred. The canal and drum are sterilized with 60 per cent alcohol, a free incision is made from below upward, usually in the posterior segment. Free primary discharge follows the incision as a rule, either serous or mucopurulent. This is wiped away with a cotton wound applicator until the canal is dry. Then the drum is massaged through the otoscope in an effort to open the Eustachian tube. This can be accomplished in the majority of cases and is recognized by a bubbling sound distinctly heard in the nose. This accomplishes for the anasthetized patient and the child the same purpose as Politzer inflation, with the added advantage of promoting drainage down the tube in the normal direction. It seems to me that opening the tube in this way shortens convalescence and that these cases run a milder course when we have been able to hear the bubbling sound in the nose than when not. This massage is repeated daily to prevent premature closing of the lips of the incision as well as to keep the tube open.

When the discharge is thick and viscid, the ear is irrigated by means of a soft rubber ear syringe using normal saline or boric acid. When the secretion is thin and serous in nature, it is not irrigated.

Treatment of the nose and naso pharynx consists of Epinine 1:200 solution ten drops in each nostril every five minutes for three doses followed in five minutes by ten drops of 10 per cent Argyrol or Silvol in each nostril. This is repeated three times a day and is the same treatment that we employ in our nasal sinus cases and used this way, we feel that a maximum astringent action is secured both in the nose, where infection of the sinuses frequently co-exists in the swollen infected adenoid mass, and in the mouth of the Eustachian tube. This thorough shrinkage opens the way for deeper penetration of the antiseptic solution which follows. It is limited to three times daily since its more frequent use is prone to be followed by a secondary turgescence due to exhaustion of the vasoconstrictor fibers from over stimulation. Finally, in the case of children where adenoid tissue is usually present, it is advised that the adenoids be removed after the acute condition has subsided.

DISCUSSION

DR. THOMAS: I want to thank Dr. Fawcett for his paper and his emphasis of the use of the otoscope. I think we are all up against it sometimes to know just when to open the drum. There is hardly ever any damage done by opening the drum, but a great deal of damage may be done by putting it off too long.

NEURITIS OF THE EIGHTH CRANIAL NERVE *

By F. O. MARPLE, M. D.
Huntington, W. Va.

CONCERNING neuritis of the auditory nerve much is already known; however, there remains considerable yet to be revealed. The subject is one of particular interest to the otologist for it is to him that patients afflicted with the clinical manifestations of the disease are sent for diagnosis and relief.

The oculist has been making accurate diagnoses of optic nerve neuritis and differentiating neuritis from other affections which resemble it, since shortly after the invention of the opthalmoscope. To be sure the otologist has no form of scope that will permit him to look directly at the perceiving apparatus as the oculist has; nevertheless, so far as instruments of precision are concerned, he has tuning forks and other testing apparatus for examining the acoustic labyrinth and nerve which are just as dependable; besides he has methods for testing the non-acoustic labyrinth and eighth nerve equal in value to anything the oculist has, for the functional examination of the eye.

As to the frequency of neuritis of the optic nerve compared with neuritis of the acoustic, the consensus of opinion generally is that neuritis of the eighth nerve occurs somewhat oftener than neuritis of the second, and yet the literature of acoustic nerve neuritis is very meagre as compared with that of optic nerve neuritis.

This state of affairs shows that the oculist is more up to the minute, so to speak; has done and is doing more work along this line than the otologist.

It occurs to me, that a health examination is not complete, without the intelligent use of the tuning fork and opthalmoscope.

Auditory disturbances of syphilitic origin usually appears in the late secondary or early tertiary period, though Politzer reports two cases which show the wide range within which hearing may be affected after exposure. The first had distinct acoustic symptoms seven days after the appearance of the chancre, and the other had no symptoms until the lapse of twenty-one years, when a gumma of the head appeared. Then, again disturbances in the hearing function may appear without any other syphilitic manifestations whatever.

No where does syphilis show its unexpected and complexing characteristics more than its insiduous attack on the internal ear.

Swift and Ellis have shown rather convincingly, that sudden deafness in the presence of syphilis, is rarely due to any infection of the eighth nerve or labyrinth alone, but is generally a manifestation of that very serious disease, syphilis of the central nervous system. Some seem to think that the eighth nerve is oftener affected in early lues than any other cranial nerve. Sudden loss of hearing generally with tinnitus, no pain, no evidence of middle ear disease, in a young adult otherwise healthy, should be regarded as almost certainly indicative of syphilitic disease of the auditory nerve and labyrinth. Conversation may be heard and high tones will be the hardest to hear, or may not be heard at all. However, in the marked shortening of bone conduction, we have one of the most striking and reliable evidences of leutic infection and Dabney says it occurs in ninety-five percent of the cases. Therefore, a deafness without apparent middle ear trouble should at once make us think of syphilis, even in the absence of any clinical symptoms. One should not be satisfied with a casual or superficial examination, attributing the cause to a local nose or throat condition, making a rapid-transit diagnosis of catarrhal deafness.

*Read before the Eye, Ear, Nose and Throat Section of the West Virginia State Medical Association at Morgantown, May 26, 1926.

McDonagh of London, says, in syphilis, deafness is not an infrequent symptom and if the deafness is bilateral, and the patient has a bad throat, it will almost certainly be due to mucous papules in the Eustachian tubes, but if unilateral will be due to nerve involvement, and that the nerve trouble is primarily a meningitis. He also states that luetic disease of the eighth nerve is more often bilateral than in the case of any other cranial nerve.

It is, I think the general opinion, that if neuritis begins after the patient has had the disease three years or more, it is usually progressive, and responds badly to treatment. In untreated or insufficiently treated cases of syphilis; if these patients, in the absence of diagnostic clinical and serological symptoms, but in the generalization stages, are submitted to the ear tests, elaborated by Barany, many cases will be found in which the eighth nerve is involved, either the acoustic, non-acoustic branch or both.

The nerve paths from ear to eyes and from ear to cerebrum must be intact, to produce the normal reaction. Therefore, if the auditory nerve is attacked by luetic lesions, thus the nerve paths are totally or partially blocked, according to the degree of inflammation, with the result that nystagmus and vertigo do not occur.

Wanner was able to make a diagnosis of syphilis in ninety-five per cent of the cases he examined, before the appearance of general symptoms. The diagnosis was later confirmed by positive Wasserman reactions and the other characteristic findings.

If the examination of the ear does now show a pre-existent lesion such as chronic suppurative otitis; if the high and low limits of the patient are normal; the perception of sound is about equal in both ears, but the bone conduction shows a decrease of five or more seconds; or is decreased out of proportion to the rest of the tests, the patient is said to have a bone conduction sufficiently reduced, in the presence of normal hearing to justify the assumption that he has syphilis. A decrease of four seconds is said to be within the normal limits.

Stokes says that in their series of cases of one hundred taken at random, that the rest was positive in forty-six per cent, when syphilis was actually present in fifty-nine per cent. In comparing the results of the lowered bone conduction test with the Wasserman in latent lues, it was interesting to note, in his cases that the two tests corresponded in eighty per cent of the cases.

The classification of eighth nerve neuritis is usually according to the etiologic factor behind it.

First—The acute infectious type, produced by any of the acute infectious fevers. It appears that some fevers have a special affinity for one cranial nerve more than another; for instance, influenza prefers the eighth nerve. Scarlet fever, mumps and measles produce neuritis of the eighth nerve, although we are more familiar with their tendency to produce middle ear suppuration.

Second—The chronic infectious type, such as leukemia, leprosy, tuberculosis, and syphilis. The latter is so prone to produce neuritis of the eighth nerve that some observers are inclined to believe that in acute syphilis no cases escape.

Third—Then we have the neuritis of exogenous toxic origin, from ingestion, inhalation or absorption, such as arsenic, alcohol, lead, mercury, carbon monoxide, illuminating gas, salicylates and quinine.

Fourth—The neuritis of endogenous origin was formerly supposed to be rheumatic but today we know it to be of focal infection, or toxins originating within the body. Recently, recurring attacks of Meniere's symptoms, in part or as a whole, have been attributed to toxic neuritis or neurolabyrinthitis, due to absorption of toxins from a focus of infection, such as pyorrhea alveolaris, septic tonsils, appendicitis, or to gastro-intestinal disturbances in people whose auditory or vestibular apparatus is hyper-sensitive.

Tinnitus and nerve deafness is manifested when the cochlear apparatus alone is affected; whereas, when the vestibular apparatus is involved, the paramount symptom is dizziness.

Mackenzie says, eighty-five to ninety per cent of eighth nerve neuritis is due to lues or focal infection. So that leaves a small percentage for the other causes as classified.

He goes further and says that eighty to eighty-five per cent of unilateral eighth nerve neuritis is due to endogenous sources and that eighty per cent or more of bilateral involvement is due to secondary lues. This would seem to simplify our problem of diagnosis considerably for the great majority of cases.

Alexander, (Vienna) says, when a case is referred with bilateral deafness and the bone conduction is bilaterally shortened, fewer mistakes will be made by pronouncing the cause to be syphilis, than by waiting for repeated negative laboratory reports. Of course, as before mentioned there are other causes of bilateral deafness, falling in the small percentage. Dabney mentions a case due to ammonium salicylate, taken by a young man during the flu epidemic of 1917, when his physician gave him ninety grains daily for ten days.

I do not think that we, as otologists, apply ourselves closely enough to this particular phase of the subject, to make the tests efficient and practical, and I think we frequently fail to recognize the importance of thorough and painstaking otological examinations, after we have exhausted other well known procedures to arrive at a definite cause of some of the vague symptoms of our patients.

We frequently see patients, whom we feel reasonably sure have syphilis, but findings serologically, clinically and otherwise are negative, so we prescribe potassium iodide and dismiss them, to have them return later with a well developed deafness, optic atrophy, or other serious and hopeless phenomena. Therefore, I believe, that if we give more thought and attention to the definite otological findings in chronic diseases we will be surprised at the number of incompleted history cards and charts that will be filed with a correct diagnosis.

SUMMARY

Eighth cranial nerve neuritis is in a great majority of cases due to syphilis and the next largest percentage comes from endogenous toxins of focal infection. The cochlear or vestibular apparatus may be affected independently, particularly by toxins manufactured within the body.

The cause of obscure symptoms in the absence of positive laboratory findings, may be determined by painstaking functional ear tests, including both acoustic and non-acoustic branches of the eighth nerve.

Any otologist who applies himself, may become adept in interpreting the findings.

BIBLIOGRAPHY

Geo. W. Mackenzie, "Labyrinth papers."

Swift and Ellis, "Journal A. M. A. May 1, 1915."

Politzer, "Labrynthine Suppurations," Disease of the Ear.

Barany, "Physiologie und Pathologie des Bogengangs Apparat."

G. Alexander, "Wien klin Wehnsch, 1913."

Dabney, "American Journal of Syphilis 1918, June, page 26."

Stokes, Abst. "Archives Otolarynology, August, 1923."

Wanner, "American Journal Syphilis." March, 1916.

DISCUSSION

Name not given:

I have viewed a number of neuritis cases, in which the hearing was somewhat impaired; following large doses of arsenic preparation, the hearing would be a total loss for two or three days, and then return, leading me to think it is distinctly wrong when dealing with a severe case of neuritis of the eighth nerve to offer the patient too large doses of arsenic. It seems to me where the nerve is involved, it should be approached with extreme care in offering the patient too large doses in the way of reaction which makes the situation worse apparently than it was before.

DR. MARPLE: I want to thank the gentleman for his remarks. My object in presenting this subject was to emphasize the importance of not so much carelessness in our ear work but to take a little more time and if we have a patient who comes in complaining of a slight deafness, it is very important that we determine whether or not it is a definite infection or catarrhal trouble.

NEWER METHODS OF HANDLING INFECTIONS OF THE UPPER RESPIRATORY TRACT *

By M. F. McCarthy, M. D.
Cincinnati, Ohio

THE progress made in bacteriology during the past ten years has cleared up so many of the stubborn problems of the past that we can now go much further in our correlation of scientific fact and our clinical understanding. We are so close to the accepted recognition of the cause of "common colds" and the so called "influenza" that in the light of that knowledge we can now make certain definite though necessarily guarded statements concerning the effect this knowledge has upon our clinical practice.

The grouping of "influenza" and the so called "common colds" is not done with the intention of giving the impression that they necessarily are related diseases, but for the purpose of bringing out the point that the organisms thought to be the cause of these diseases apparently are much the same in the size and in cultural characteristics. Each of these types of organisms are able to pass through the Berkefeld filter and while apparently able to initiate separately the syndrome with which each is associated, they are both apparently activators of other organisms which carry on the chain of symptoms which follow. As some one has well stated, "The cause of influenza condemns but the other organisms execute." So, too, in the case of the so called "common colds" the activator apparently initiates the struggle which if not terminated within the period of self limitation is carried on by other organisms as sinus infections, tonsilitis, bronchitis, broncho-pneumonia, and the like.

Newer cultural methods have made possible the recognition within the last decade that there was a so called normal nasal flora and the work of Broomfield and his associates has gone far toward giving us a practical knowledge of what happens to this flora from season to season and from one year to the next. These findings, when correlated with the findings of others, have apparently revealed that the normal nasal flora or so called "constants" are non-pathogenic and that when pathogenic organisms are found in the nose or throat they are ordinarily not there permanently, but are transients and disappear, to have their places taken sooner or later by other types, which in turn disappear. It has been shown that it is exceedingly difficult to create permanent carriers of these so called pathogens or pathogenic organisms, the protective mechanism of the nose and throat being exceedingly efficient, except in the presence of disease or mechanical injury. When, in the absence of nasal disease, persistent carriers of pathogens are found, the organisms other than the normal nasal flora are usually found to be harbored in the folds of the lymphoid tissue of the epi-pharynx and faucial tonsils. Experimental evidence seems to show that the artificial creation of the carrier state is a difficult thing to accomplish except in the presence of tissue variations from the normal.

While there is much left to be accomplished in increasing our comprehension of these almost purely bacteriological problems, there is ample ground for drawing some tentative conclusions upon which to base our concepts of clinical procedure. Clinically at least the following things seem to be true:

1. The normal nasal flora has added to it from time to time pathogens which may be faculative pathogens or obligate pathogens. This classification depends upon whether their presence *may* cause symptoms or

*Read before the Eye, Ear, Nose and Throat Section of the West Virginia State Medical Association at Morgantown, May 26, 1926.

whether their presence *always* causes symptoms.

For example—Except as one had just recovered from typhoid fever, the presence of typhoid organisms in the secretions would be taken to indicate the presence of typhoid fever in the individual.

2. The so called acute "cold" differs radically from acute purulent sinus infection. The acute cold is often the activator of the organisms which may cause acute sinus infection.

3. Acute sinus infection may be directly transmitted during its periods of heightened virulence, without apparently going through the preliminary state of activation.

4. Subacute sinus infections, or the state between the acute and chronic are not so easily transmitted. It can be transmitted, however, usually upon repeated exposure and need not be by direct contact.

5. Transmission of sinus infection does not at all imply that the infection so passed will of necessity manifest the same virulence or powers of resistance in its new habitat.

6. Chronic sinus infection is the result of the failure of a subacute sinus infection to recover.

7. Chronic and subacute sinus infections may become acute without going through the preliminary state of activation. At least it may be said that if there is a period of activation that it is very short and that an activator of no great virulence will serve to begin acute exacerbation.

8. Repeated infections with organisms from a chronic nose, particularly when there is present a state of acute exacerbation, has a definite influence to the creation of a chronic state in the nose of the one infected.

9. Chronicity is probably less determined by the type of the infecting organism than it is by the break down and permanent disability of the protective mechanism.

10. The state of chronicity is probably determined in most cases, by the permanent loss of the action of the ciliated epithelium; by a permanent disturbance of the nerves governing the blood supply of the intranasal tissues; by a persistant advance of the destruction of the mucous glands and goblet cells and the replacement of functioning tissue by scar tissue, with a resultant permanent change in the amount and type of mucous secretion.

11. Clinical evidence seems to point to the fact that the activating organism of common acute colds can be carried as a facultative pathogen. The bacteriological evidence at the present time seems to indicate that it is not transmitted as an obligate pathogen except during the early stages of the infection.

If then, this is a summation of one's belief concerning the salient factors of the problem, then one must revise in some measure his clinical methods. One can no longer swab or spray the suffering patient until he is comfortable and then pass him on with a fair degree of assurance that his protective mechanism will care for him in the end. Consideration must be given not only to the patient himself but to his friends and his family.

This consideration begins with the question as to how the infection began and may take one deeply into the life and habits of the patient, as related to the contacts with his family. From this one passes to a careful consideration of the patient's previous and present symptoms and susceptibility to infections. Then comes a careful estimate as to the type, location and severity of the present infection and from this will be determined the therapeutic measures to be adopted. Finally and probably most important comes the physician's advice to the patient concerning the methods and rewards of self isolation and that the avoidance of immediate reinfection is of great importance in determining the outcome. In the hands of the discreet there may also be added at the first examination a measure of prognosis with the definite mental reservation on the part of the physician that the patient finally is to be told exactly where he or she stands, with relation to chronicity. The importance of this will be brought out in a moment.

The repeated appearance of a patient in one's office with acute upper respiratory disease is not always an indication that the patient's resistance is necessarily low, but that he is being repeatedly infected by some-

one with whom he is coming in contact. We have repeatedly found in such cases, where there was a distinct tendency to recover only to have a reinfection occur, that some member of the household was an unrecognized sufferer from chronic sinus disease. We have on three occasions checked through a family in search for the offender to find that the domestic in the kitchen was a chronic sinus case, whose dismissal was followed by a prompt disappearance of any but the ordinary cold infections at relatively long intervals. We believe that every domestic handling food should have a nasal examination and that all immigrants who are likely to find their way into domestic employ should have careful nasal examinations at Ellis Island. We have seen a number of German and Irish immigrants with foul nasal infections who were admitted within the last five years, who certainly never had a nasal examination on admission to this country. It was with considerable satisfaction that I had one such domestic deported, who from my own observation had kept most of the members of her employer's family in the hands of various physicians for a period of over two years. It never occurred to anyone to ask why these infections were taking place.

Rarely does one hear it suggested in the office of the physician that it might be well too, for a family that is suffering from frequent infections to stop washing in standing water and drinking from a common glass in the bathroom. How often is a mother allowed to go home to her kitchen with a leaking nose, without a word of warning as to the care of her hands or the necessity of avoiding infection of her children by the interdiction of kissing. These are not points of theoretical importance, but have a direct effect upon one's succeses in influencing recovery.

The type, location and severity is a phase of the problem which is endlessly discussed and which need have no place here. It is perhaps well at this moment to state that the only basis for terming an infection chronic is that it does not recover following the procedures which ordinarily result in disappearance of the acute processes. This is of course a crude basis for classification, but it must serve until a better is found.

Repeated nasal infections with prolonged periods of convalescence call for an inquiry, not only into the state of the nasal aecation, but into the factors having an influence upon resistance to infection. The more recent measures of importance are administrations of chlorine gas, mixed autogenous and antigen vaccines, sterilized and administered in various ways, heliotherapy, dietary measures and the careful study of liver, thyroid and kidney function. We have the right to expect our internists to make definite suggestions as to how to bring these organs to their maximum of efficiency for the importance of their influence in this problem has but just begun to be appreciated.

At the suggestion of Dr. Mills of the Research Department of Internal Medicine of the University of Cincinnati, we have been offering our early acute patients large amounts of orange juice sweetened with glucose, apparently with excellent results. This is offered to supply the patient at the moment of stress with an over abundance of available vitamin, and at the same time to offer an easily available form of sugar which apparently in the course of its oxidation encourages the breaking up of the toxic substances present. Many of the patients so treated have apparently gone through an exceptionally abortive form of common cold and been almost entirely well at the end of forty-eight hours. About one case in four does not react at all to this treatment and goes on to the full realization of the infection. It is much too early, however, to make any definite statement concerning the usefulness of this procedure which in part depends upon further discoveries concerning the metabolism of glucose.

We believe that in the acute and subacute sinus infection the mercury vapor, quartz, filterated and carbon arc lights have a definite therapeutic value. We believe that their local effect upon mucous membrane of the nose and throat, is of negligible value and that their value rests here as it does in rickets, on the influence exerted upon more distinct physical factors as yet not entirely understood. Our understanding concerning the use of cod liver oil and the influence it

exerts upon the calcium and phosphorus blood content gives us some hint as to the probable manner in which the beneficial effect of these lights is accomplished. It might be suggested that the manufacturers of the various lights now upon the market, equip a common laboratory where the therapeutic values of their lights be tested by long, continued checks of their influence upon the nasal flora.

We have recently been offering our patients suffering from repeated acute attacks of common colds or who were struggling with a subacute infection, a solution prepared by Dr. Mills, which consists of an alcoholic extract of the vitamins removed from chopped plants, which were high in vitamin content. Most of the undernourished patients put on this extract gained weight with relative rapidity, spoke of increased desire for food, although it could not be definitely said that the disappearance of nasal infection was much hastened.

Chlorine gas inhalations are at least the subject of sufficient interest as to have been twice checked, apparently by competent bacteriologists, as to the effect which the gas in various dilutions had upon the nasal flora. These findings were, in the main, discouraging. Our own results have been for the most part questionable, although we have occasional patients who are so much benefitted that they insist on coming in at every acute nasal infection for gas inhalation. Our feeling is that the value of chlorine gas treatment in its present form is greatly overrated, except in the very early stages of acute cold.

The local treatment of upper respiratory infections hinges upon the physician's ability to tell when his case is recovering or has recovered. Simple inspection will not always tell the story, and in our opinion there is no method so valuable as the study of the wash obtained by nasal irrigation. It must be accepted that in the vast majority of cases in the presence of clots and masses of muco-pus, the origin of these clots lies in infections of the sinuses.

The various dye compounds at the present time in use in nose and throat therapy are in the main useful in selected cases. All of the dyes at present in the field are so irritating that it is exceedingly difficult to use them in nasal therapy. In our hands 5 per cent mercurochrome has been the most useful, although we do at times resort to 5 per cent solutions of Gentian Violet in the presence of gram positive infection. Wherry and Fischbach have been working with acri flavine in various dilutions finding that it has particular action upon staphylococci and pneumococci. Rockwell advocates the use of 15 to 25 per cent sodium chloride and magnesium sulphate solution, in equal parts. This solution while unpleasant to the throat membranes definitely inhibits bacterial growth and often accomplishes a rapid disappearance of the manifestation of infection. This solution is obviously impossible for use in the nose.

SUMMATION

The newer methods of handling upper respiratory tract infections take into account not only the patient but those with whom he comes in contact as influencing the outcome of the disease. Consideration must be given to the fact that one chronic nose in a family is almost certain to result in other chronic nasal infections before many years. Prevention of this sort of passage can only be accomplished through self isolation. Bronchitis and broncho-pneumonia are practically always associated with sinus infection. Recurrent bronchitis and broncho-pneumonia is usually pathognomonic of subacute or chronic purulent sinus infections. Our present methods of influencing changes in the nasal flora are not as yet efficient. Chronic sinus disease when once definitely established always results in a definite lowering of the affected tissue to new infections, whether operated or not. Realizing this, all of our worthwhile advances will probably come in the handling of acute infections and their elimination before they become chronic.

THE COUNTY SOCIETY SECRETARY *

By J. C. IRONS, M. D.
Dartmoor, W. Va.

PERHAPS you may question the wisdom of taking so trite a subject for discussion. I trust, however, as we proceed, we may all be made to realize the value of an ideal secretary.

To my mind an ideal secretary is to the society what the motor is to the auto. A real live secretary can elicit action, secure cooperation, and revivify dormant energy; and there can no more be successful functioning of an auto, with a defective motor, than can there be active society with an inefficient secretary. Yet we must never forget that while the motor is essential, it is not an auto; nor, while the secretary is essential, he is not a society. We cannot any more get satisfactory action from an auto—however perfect the motor—unless the accessory parts properly function; neither can we have an ideal society—however ideal the secretary—unless the members fill their respective duties, in cooperation with the efforts of the secretary.

I may state, just here, that my desire, in preparing this paper, is to elicit a better, more active cooperation in our societies, than seems to be now attained. That we may more clearly see the need of this, let us learn the duties of an ideal secretary. While we are discussing the county secretary, I may suggest that the same principles apply, whether it be county, state or national secretary.

As I conceive it, the duties of the ideal secretary are two-fold: common or ordinary, and extraordinary. The common, or recognized duties, may be summarized as follows:

1. He is required to keep a roster of all the members of his society, (the more condensed and easier of access the better).

2. He is required (as I am recently informed) also, to keep a list of all the eligible non-members within the bounds of his territory.

3. He must keep a record of all the proceedings of the society, note the attendance, make a synopsis of the papers discussed and of the discussion.

4. He must read all communications of interest, and make such replies as the society may direct.

5. He usually has to formulate all resolutions, and send them to parties for whom intended.

6. He is required to, as far as possible, collect all dues, remitting the portion allotted to the state society.

7. He must keep a record of the financial standing of all the members.

8. He is expected to see that the program is prepared, edited, and distributed to all the members, at proper time.

These are what we may term the common required duties, which would seem enough to occupy the time of any secretary, especially with the pittance which most of them receive. While these are necessary, and may be efficiently or indifferently performed, they, in my judgment, are not the most important of the duties that may mark the most successful secretary.

Unfortunately, to our shame as a profession, perhaps there are more strifes, enmities, jealousies, bickerings and ill wills in our societies or profession, however Utopian we profess to be, than in any other profession. The secretary who can best harmonize the discordant elements, or factions, is the one who is the most efficient in duty; and he who can succeed, should have his name inscribed in golden letters in the Book of Fame. It is therefore necessary that the secretary should be not allied with any faction, and just here, I may say, this is a most difficult problem. Usually, where there are factions, and we

* Read in the fifty-ninth annual session of the West Virginia State Medical Association at Morgantown, May 25, 1926.

have too many of them, each may try to elect men of their respective factions, and the secretary may be, however unwillingly, or unconsciously, necessarily factionally encumbered, which to say the least is very unfortunate. My judgment is that in dealing with the society, either individually or as a whole, the secretary should ever attempt to give each faction a fair and impartial part in programs, duties, committees, and all functions of the society. The better he can succeed in this the greater will be his success.

The ideal secretary can do much in promoting the social relations of his society, and the more active support he can have of the president, the more successful will he be. There are many functions arising in which a vigilant secretary can deftly secure a more harmonious relationship among the members. He should always seek to promote good-will, cooperation and fellowship among the members, avoiding all antagonisms, as far as possible. To accomplish this requires much tact, patience, and perseverance, and may be the greatest good that a secretary may accomplish. These duties may be that of each well-wisher and loyal member, but the secretary has greater access and larger opportunity and may more easily attain the objective than anyone else, by reason of the official duties that may constantly present an opening.

We can readily see that these multitudinous duties of the secretary may require much thought, time and arduous labor, and the more faithfully they are performed, the greater is the success.

Unfortunately, it seems that many of the members appear to think that the secretary is the whole society. There are always a faithful few, who are ever ready to assist in doing the work of the society, but—alas! too many are only nominal members, seemingly seeking to "feed upon the loaves and fishes," but never willing to carry a loaf or a fish or even gather up the fragments. They never attend the meetings, never read a paper, nor do anything to advance the interest of the society. I may say here that in as large a territory as we have in the Barbour-Randolph-Tucker Society, many members are so isolated by distance and means of access as to make it practically impossible to attend meetings, but that does not excuse the many who are not so situated. We are disgusted with the so-called excuse so frequently made, by members, when asked to prepare a paper, or take part in discussing matters. The usual excuse is, "lack of time," when we all know that these slack members have more time than practice. The general rule is that the busiest physicians and surgeons are the most regular in attendance, and most generous in aiding in our programs. We are forced to believe that the real reason, though not acknowledged, is lack of interest, rather than lack of time. These members who seldom or never attend the meetings; who fail to do any active work; who are the slowest in paying dues; make greatest complaint of high cost of membership; are most severe in criticisms; are in fact the drones; are the worst knockers against the societies, the profession, and the general condition of affairs. These are the members who are so busy (?) that they can't take time even to answer a written request, do anything to promote the good of the society, the community, or even advance their own condition.

I do not know how it would work, but I feel that possibly it would be helpful if instead of noting those present, we would have a roll call and mark the absentees; and require them to give a plausible excuse for absence. To succeed as a society and what would add to the ease, facility and success of the secretary in any society, is the loyal cooperation of the members. You can see what a satisfaction it would be to a secretary if the members would promptly reply to his communications. Frequently these are not answered, or are delayed till the time for action is past. Prompt action on their part, would not only facilitate the work but would conserve the time of the secretary, and lessen the expense of the society, as each communication adds to expense, in time, stationery, postage and so on, and usually greatly retards the functioning of the society.

How ideal it would be if, instead of placing all the burdens of the society on a few willing, active members, we could have every member active and progressive. The work of the secretary would then be a pleasure

and the success of the society would be assured.

Another condition, which is often provoking, and adds to the labor of all the secretaries, is the neglect to pay dues promptly; many delay so long that they have to be notified and urged time after time, to get payment. It costs no more to the member to pay in January, than in April or May, but it costs much more labor to the secretary, and expense to the society to have to send numerous notices. It should not be necessary to give notice at all, as every member who receives and reads the Medical Journal, and gives any attention to his own society, should know that dues begin the first of January, and should be paid before the first of April, and yet each year, some members appear startled when notified that they lose membership, automatically, after April first.

I beg of the members to not make a literal pack horse of your secretary, but get into harness and loyally support your individual society.

I often feel like the western editor when he complains as follows: "If we publish things from other papers, people say we are too lazy to write. If we write jokes, folks say we are silly. If we don't, they say we are serious-minded. If we stay in the office, we should be out after the printers; if we do, we are neglecting our work in the office. If we wear old clothes they say we are unable to pay our debts; if we wear new clothes, they're not paid for. Sympathize with us. What are we to do anyhow? Like as not someone will say we swiped this paragraph from an exchange. We did."

If I work faithfully, I am too officious; if I fail in duty, I am lazy and neglectful. If I try to collect, I am getting a rake-off. If I record what is said, someone is offended; if I fail to do so, I am partial. If I do not write a personal dun, I give no notice of back dues; If I do, they are sore. I am in a dilemma. I'm damned if I do and damned if I don't. What am I to do, anyhow?

In conclusion, allow me to say: If I may have said anything that may arouse an interest in more efficient secretarial work, and secure a better cooperative support from the members, I will be abundantly compensated for this small effort in bringing these matters to your attention.

If our societies are to accomplish the great work designed, each member must be made to feel his personal responsibility. Heretofore, nearly all the work is done by the few faithful members, while the majority do nothing. In this work, as in all enterprises, the law of compensation applies—"we get out according to what we put in." No one can see or receive benefits unless he actively participates in the work. The time has come, when the public demands the best medical and surgical service, and we can only get the best by keeping in touch with the activities and achievements of the profession; and that can best be done in your societies.

I am pleading for a more active, virile secretary, and for a better general cooperation from all the members. With this working combination, success is assured—the degree of success being measured solely by the thoroughness of the cooperation.

DISCUSSION

DR. C. H. MAXWELL, Morgantown:

In discussing this paper, I want to call your attention to the fact that the writer of this paper is the only ideal secretary in the state that I know of. His work fulfills all the requirements in a perfect manner. There seems to be nothing expected of a secretary that he does not accomplish. When his paper appears in *The Journal,* I would suggest that each member of our association study it, and I would specially recommend that the various secretaries would take it to heart and strive to be equally as good.

It was my lot to be secretary of Monongalia County Society for a number of years. My work was "child's play" compared to the work of the Barbour-Randolph-Tucker society. In our county all the members but three lived within a mile of our meeting place, while his members are scattered over three large counties, residing at thirty-one different post offices. In his report he gave the names and addresses of every physician in his bailiwick, whether he belonged to the society or not. He keeps posted on the location of every physician, with all their movings—about seventy all told. He knows the

ethical and professional standing of them all. We can all see the great amount of correspondence it takes to keep in touch with them. He does it, and he does it well. Again I would commend him as the outstanding ideal secretary of our state.

MR. STERRETT O. NEALE, *Executive Secretary, West Virginia State Medical Association,* Charleston:

I have been very much interested in this paper. Dr. Irons very kindly let me see a draft of it before I came here. The thing that impresses me so much about it all is the need for the cooperation of the entire membership with the county secretary. After all, in the last analysis, your organization is founded solely on the activities of your local secretaries, and if you have an efficient secretary he earns everything he gets. The office may be called an honor, but there is a lot of work attached to it.

The organization of which Dr. Irons is secretary covers three counties. With the exception of the Grant-Hampshire-Hardy-Mineral society, it covers a larger area than any other county society in West Virginia, and you can appreciate what a task he has to keep up with the work in that wide district.

Of course, I have been in this work only a little over a year, but it is my duty to do anything I can to assist the county secretaries, and if I can do anything to make the load a little lighter for them, I want to do it. I certainly thank Dr. Irons for letting me discuss this paper.

DR. H. G. STEELE, Bluefield:

I feel somewhat as Dr. Maxwell did when he got up to discuss this paper; I felt that I was one of the best county secretaries the West Virginia society has ever had, but I turn the honors over to Dr. Irons. I feel that I have profited by Dr. Irons' paper, and that I shall make a really good secretary when I get back. Dr. Irons brought out so many points that I do not know whether I can make the paper any better, but there are a few I want to emphasize. One is that the secretary is nothing more nor less than an officer in an army, and unless the men are back of him, in that regiment or company, he will not be successful. Unless you do your part, the society will not succeed. The main thing is cooperation.

There is one thing many of us do not do, and that is, keep a roster of the nonmembers. I do keep a roster of the members of the society, but it is mighty hard to keep a roster of those that are not members. Whenever your secretary writes to you asking for the names of the men in your section who are not members, please answer that correspondence. You have no idea how many letters we secretaries write, and then you fellows do not even honor us by calling over the telephone or write a postcard; it is simply time wasted. The county society depends upon you. It takes only a little of your time, but it takes us hours. You have no idea how long it takes us to get up a program. We have sixty members in Mercer county, and I could tell on the fingers of one hand the reliable members. Now, when you are called upon to write a paper, do it. The secretary cannot do it all.

Roberts' Rules of Order say that a secretary, or anyone making a report of anything, should make a synopsis, not in the same language. Now, when I am reporting important things, I try to say them as nearly in the way the speaker said them as I possibly can. That is not according to parliamentary law, and I should like to be set right about it.

DR. A. P. BUTT, Elkins:

I feel that I should not let this opportunity pass without saying that we have a very good secretary in Barbour-Randolph-Tucker. There was a time, for many years, when Barbour-Randolph-Tucker was the largest society in the state. It was at one time an excellent society, and while we have a good secretary now, we do not have a good society. It is true that the area is large, but it was just as large years ago, when the roads were not nearly so good as now. I do not know the cause, but I think it is in the air, and I think the same condition prevails throughout the state.

DR. H. A. WALKUP, MacDonald:

Probably this is not the proper place to bring this up, but I can not pass this opportunity by. We appreciate the excellent secretaries that have been before this meeting this morning, but our secretaryships are

on the wrong principle. The reason we do not have better attention is because of lack of business methods. My idea is that if you will hire a paid secretary, and either get a good-looking flapper with Marcel waves, or get a competent man, such as we think our association has, and get that secretary to look after this work, and put it on a business basis, it will be much more successful.

My opinion as to the reason the men do not turn out competent papers is that it is because of the little cliques they have. Look inside and find out the trouble, and you will find that these little groups are keeping other men out.

I hope this association will look into this matter before it adjourns, and put it on a business basis.

DR. R. A. IRELAND, Charleston:

I was secretary some years ago of the Kanawha county society. They have now a better secretary than I was, and the reason that we have a smaller membership now, in my opinion, is that the dues have been considerably raised. You will smile when I say that, but I know it is a fact that some of our men dropped out because they got sore when the dues were raised. That should not prevail for many years, I believe, but just now we are in the valley of despondency because of that. We need a little more newspaper publicity, and we need a little more education to get the men to appreciate the value of organized effort for our good. I have had something to do in the struggle against cults in the legislative body of our state. Two and a half years ago I helped to defeat the chiropractors. Last session, in spite of our best efforts, they put it over on us. I think the secretaries should recognize the value of newspaper publicity, and when our people look upon us with a little of the old-time respect and favor, we shall get the boys back.

DR. JAMES R. BLOSS, *Pres.*, Huntington:

There is a funny thing about doctors. They pay for everything else, but do not want to pay for the very things that affect their life's work. They will join the Rotary club and the Lions club and pay far more than the medical society dues, or join the Shriners or the Templars and pay for it, but they expect to get the very best kind of service from the medical society without paying for it, just like the people who expect to get top-notch medical service, laboratory examinations and all, at 1900 rates. It cannot be done.

DR. C. A. RAY, Charleston:

I am not a medical society secretary; never have been; and never will be. The question of putting all the work on the secretary is a mistake. Take our society in Kanawha county, where there are at least 160 doctors in the county and we have about 115 enrolled, it has not been and cannot be accomplished by depending on the secretary to go out alone and get these men to come in. It is up to the members of the profession, up to the members of the society, to help bring in those men. In our society down there, with about 115 members enrolled, there is probably an average of 20 to 25 who attend the meetings regularly. If each of those 25 men is interested, and if he would take some man by the arm each time he meets him on the street, and say, "Why weren't you at the society meeting?" and tell him what they had and why it was interesting, that fellow after a while will have a hunch that he is missing something, and in that way you will create interest among the doctors and help the secretary as you can in no other way.

DR. IRONS, closing the discussion:

I have nothing further to say, except that I think Dr. Ireland opened up one of the reasons why our society has dropped off in membership, and that is the increase in dues. We had quite a number that dropped out because they felt they were not getting benefit enough. They were the ones who did not attend meetings, usually; those living at a distance. It is the faithful ones that are willing to pay the dues. Then some have died and some have moved out of the territory, so our membership is not as large as it was. The faithful, however, still hang on.

As to the statement that the papers are not interesting, that is not so; because we sometimes get up a program and have men come from a distance who give excellent papers, and sometimes have a banquet, and still the attendance is poor. We have simply come to a time when people are careless and indifferent except about things that give them pleasure.

WHO PAYS?

The following is from one of Girard's columns in *The Philadelphia Inquirer:*

"A French court awarded 10,000 francs to a veteran of the World war. The man who paid was a surgeon who performed an operation on his foot, but forgot to remove a couple of pieces of gauze from the wound.

Said the judge: "It would be unjust and dangerous for society in general to proclaim that in no case are physicians and surgeons responsible for the manner in which they practice their art."

Similar cases in America are infrequent, yet they do occur. The sister of a widely known Philadelphian was the victim of such a mistake.

A surgeon in that case sewed up a pair of forceps in the wound. There they remained for half a dozen years, causing continued illness and finally death.

In this instance, the surgeons had died before his former patient, and the public heard no more about it.

I heard one of the ablest surgeons this city was known say that he once sewed up a bit of gauze in a man's head.

The condition of the patient in a few hours convinced this quick-witted surgeon that something unusual had occurred. His courage matched his wit, a second operation revealed the blunder, and a quick recovery followed.

That, of course, is a far happier method than the other and much-advertised one, of the physician who "buried his mistakes."

Judge John Marshall Gest, noted almost as much for his scholarship and wit as for his judicial attainments, is fond of calculating chances. I wonder if he ever calculated this:

How often does a good lawyer win a poor case and, vice-versa, how often does a poor lawyer lose a good case?

In other words, is it the fault of your cause or your attorney when you lose?

When an engineer makes a misstep, down tumbles the Quebec bridge.

The gunner makes a mistake, and he misses the target. A doctor's mistake registers as quickly, but it is not so easily detected.

Business men stumble. In their case, a telephone ring for the sheriff to nail up the door is the symbol of error.

A general's blunder costs a battle and perhaps a war.

The politician's mistake loses him votes and the office he seeks.

A misjudged fist coming his way knocks out the pugilist, while a wrong slant at a baseball in the sky might cause a fielder to drop a world pennant.

Surgeons may deem it harsh to be fined 10,000 francs for a mistake, and yet I suspect all other classes of men pay in one way or another for theirs."

It is of interest to note the quickness with which a lawyer will enter suit against a physician for alleged malpractice. This explains why the physician is forced to carry liability insurance and the state societies to maintain a medical defense fund, and it would seem that the aim of the lawyer to a greater degree is to obtain a settlement, if possible, from the insurance carrier. As a rule, he is working on a 50-50 basis with his client. It is noteworthy that one lawyer never brings suit against another lawyer for alleged malpractice when the attorney has lost a case for his client. The attorney, it is to be supposed, has rendered his best service to his client, yet under such circumstances, why is not the legal profession harassed by suits for alleged malpractice?

Organized medicine has done much to offset the viciousness of such suits instituted against its members. In this regard, one never knows where the lightning will strike. You, reader, may be the next. Your protection is to keep in good financial standing in your county medical society, in order that you may have the support of your county and state medical societies in medical defense in these adversities.—*Atlantic Medical Journal.*

THE WEST VIRGINIA MEDICAL JOURNAL

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS

J. HOWARD ANDERSON, Marytown — WALTER E. VEST, Huntington — CHARLES W. WADDELL, Fairmont — HARRY M. HALL, Wheeling

THE JOURNAL issued on the first of each month. Entered as second-class matter, January 1, 1926. Acceptants for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Authorized July 24, 1919.

Subscription to Members ..... $2.00 Per Year
Subscription to Non-Members ..... $3.50 Per Year
Single Copies ..... 35 Cents

OFFICERS

President:
J. R. BLOSS ..... Huntington
President-elect:
CHESTER R. OGDEN ..... Clarksburg
First Vice-President:
R. O. ROGERS ..... Bluefield
Second Vice-President:
H. C. SKAGGS ..... Montgomery
Third Vice-President:
D. A. MACGREGOR ..... Wheeling
Treasurer:
HUGH G. NICHOLSON ..... Charleston
Executive Secretary:
MR. STERRETT O. NEALE ..... Charleston
Delegate to A. M. A., 1926:
J. R. BLOSS ..... Huntington
C. R. OGDEN, *Alternate* ..... Clarksburg
Delegate to A. M. A., 1926-27:
H. P. LINSZ ..... Wheeling
R. A. ASHWORTH, *Alternate* ..... Moundsville

COUNCILORS

First District:
H. P. LINSZ, (1-year term) ..... Wheeling
C. G. MORGAN, (2-year term) ..... Moundsville
Second District:
C. H. MAXWELL, (1-year term) ..... Morgantown
C. H. HALL, (2-year term) ..... Elkins
Third District:
JOHN FOLK, (1-year term) ..... Bridgeport
C. R. OGDEN, (2-year term) ..... Clarksburg
Fourth District:
J. E. RADER, (1-year term) ..... Huntington
W. E. VEST, (2-year term) ..... Huntington
Fifth District:
J. H. ANDERSON, (1-year term) ..... Marytown
H. G. STEELE, (2-year term) ..... Bluefield
Sixth District:
R. H. DUNN, (1-year term) ..... South Charleston
C. A. RAY, (2-year term) ..... Charleston

¶ All original articles for THE JOURNAL must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

¶ Our readers are requested to send marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

¶ It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

¶ Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

¶ Advertising forms will go to press not later than the tenth of each month. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

¶ Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, 303 Professional Building, Charleston, W. Va.

STANDING COMMITTEES

Medical Defense Committee

H. P. Linsz, Wheeling; C. R. Ogden, Clarksburg; C. G. Morgan, Moundsville.

Committee on Scientific Work

G. H. Barksdale, Charleston; O. D. Barker, Parkersburg; D. A. MacGregor, Wheeling, Scientific Secretary.

Public Policy and Legislative Committee

C. A. Ray, Charleston; G. A. MacQueen, Charleston, R. H. Walker, Charleston; James McClung, Richwood; J. R. Bloss, Huntington; D. A. MacGregor, Wheeling.

Committee on Hospitals

Robert J. Reed, Wheeling; B. H. Swint, Charleston; R. J. Wilkinson, Huntington.

Committee on Professional Relations

J. R. Shultz, Charleston, chairman, (3-year term); H. G. Nicholson, Charleston, (1-year term); H. R. Johnson, Fairmont, (2-year term); A. G. Rutherford, Welch, (4-year term); W. R. Goff, Parkersburg, (5-year term).

Surgical Section

E. Bennette Henson, Charleston, chairman; W. R. Goff, Parkersburg, secretary.

Eye, Ear, Nose and Throat Section

T. W. Moore, Huntington, chairman; R. A. Tomassene, Wheeling, secretary.

Woman's Auxiliary Officers

President, Mrs. A. G. Rutherford, Welch; *First Vice President*, Mrs. W. H. St. Clair, Bluefield; *Second Vice President*, Mrs. J. P. Lilly, Morgantown; *Secretary*, Mrs. C. M. Scott, Bluefield; *Treasurer*, Mrs. C. A. Ray, Charleston.

EDITORIAL

THE PRIMARY ELECTION

There are two candidates for the Republican and Democratic nominations for Congress in the Fourth Congressional district whom the members of the medical profession in the district should extend every effort to defeat. We refer directly to Harvey Marsh, Republican, of Parkersburg, and Harry H. Darnall, Democrat, of Huntington.

Recall their votes in the last Legislature when both were members of the State Senate? Let us refresh your memory:

Both voted consistently with the chiropractors and were largely instrumental in bringing about the passage of Senate Bill No. 260, placing two chiropractors on our public health council. Darnall loudly, frequently and flippantly voiced opposition to scientific medicine.

Senator Marsh, President pro tem of the Senate, presented a vacillating front but usually managed to make up his mind ALWAYS in favor of the chiropractors. He supported virtually every chiropractic proposal, even casting the deciding vote upon one amendment in which it was sought to raise the educational qualifications required of chiropractors. He is said to have stated that he intended to vote for the amendment but instead, he voted against it and made no effort to change his vote and the result.

There is more than these unsavory records to warrant this editorial, also. If either of these men win the nomination and should win in the general election in November, the chiropractors will call upon them to support chiropractic legislation in Congress.

The chiropractors are proposing that Congress compel the U. S. Veterans' Bureau to open all government hospitals and provide chiropractic treatment for wounded and disabled heroes of the World war, at government expense. They are seeking to have their "art of healing" legalized in the District of Columbia and a proposal now is pending before the U. S. Senate committee on the District of Columbia to give them full sway.

Who knows but what the chiropractors, well pleased with the records of Marsh and Darnall in the State Senate, are not pushing them for the Congressional nominations?

Frankly, the situation in the Fourth district is disquieting. Election of either candidate will be a slap at medical progress. Accordingly, the time has come when intelligent men and women MUST awaken to the danger, put aside partisan politics where matters pertaining to the public health are concerned and use their ballots intelligently.

The logical candidates in the Fourth district for support of the medical profession are former Congressman James A. Hughes of Huntington, Republican, and John D. Sweeney of Williamstown, Democrat.

Members of this association in other districts should check closely upon the records of their candidates while members in the Fourth should avail themselves of every honorable means of defeating Marsh and Darnall. If they are defeated in the primary, so much the better. It is a matter of public policy—not politics. —C.A.R.

TECHNICALITIES

How to curb irregular practitioners of medicine?

That is a problem confronting, not the medical profession, but the people, the taxpayers of West Virginia.

One of the latest cases given some prominence in the press of the state is that of one Alexander Ross of Wheeling, who twice has been arraigned on charges of practicing medicine without a license in Ohio county. Upon his first appearance, the grand jury failed to return an indictment. Later, upon representations of Dr. W. H. McLain, city county health commissioner, Ross was indicted—but after deliberating for some ten minutes a jury in Ohio county court returned a verdict of not guilty!

Ross was charged with having prescribed treatment for a young man, who, finding himself not cured, complained to the health commissioner. The prosecutor presented the state's case. Immediately defense counsel raised the technicality that the state had failed to prove that Ross did not possess a state license.

However, the jury had been excluded during the arguments. After being recalled to hear the arguments, twelve tried and true citizens thereupon adjourned to begin their deliberations and promptly returned a verdict exonerating Ross.

In reporting the case to Doctor W. T. Henshaw, state health commissioner, Dr. McLain related that Ross "is practicing medicine every day but it is very difficult to convince a jury of the fact."

The foregoing therefore raises the question: "How shall the activities of non-licensed practitioners of medicine be curbed?" Dr. Henshaw believes that the most effective means lies in the enactment of a new medical practice act to take the prosecution of the irregulars out of the criminal courts and place it in the civil courts instead. He believes that injunction proceedings to prohibit and restrain their activities would be a far more feasible method of procedure.

It will be recalled that the public policy and legislative committee sponsored a bill in the last legislature which would have transferred the jurisdiction. Although it had the right of way, it failed of passage because of lack of time in the closing hours of the session. Frankly, it was blocked by the chiropractic-naturopath bloc, the naturopaths swarming to the floor of the house of delegates in the last minutes of the session, spurring on a leather-lunged law-maker from a rural district who announced his intention of blocking every other piece of legislation if the medical practice act bill was given the precedence over the naturopath bill.

Imagine the situation! The same men who sponsored the chiropractic proposal sponsored the naturopath license bill.

But to get back, Dr. Henshaw further believes that an excellent plan would be to require all practitioners of medicine, osteopathy and chiropractic to register each year. Thus, a non-licensed practitioner could not register and if the state should prove that he treated the sick, it would constitute *prima facie* evidence of violation of the medical practice act.

The procedure then would be plain. The prosecuting attorney would make the necessary representations to the civil courts either in open court or in chambers, the temporary restraining order would be handed down and the defendant would be required to appear and show cause why the restraining order should not become a permanent injunction. Violation of either the temporary or permanent orders would constitute contempt of court and the penalty would include either a fine or jail sentence or both, at the discretion of the court.

One hears continually the cry from prosecuting attorneys: "There's no need to have this man indicted. You will never get a jury to convict him." So it appears that not enough importance is attached to a medical practice act violation. Juries are often selected rather haphazardly, sworn *en bloc,* so to speak; few if any questions are asked in qualifying them to serve. The defendant wears the air of a martyr being persecuted by the "doctors' trust," the jurors can't see why the defendant shouldn't prescribe a few pills if he wants to, they feel sorry for him—

and after "deliberating" ten minutes, declare him not guilty.

Little or no thought is given to the dangerous precedent that is established. If one irregular goes scot-free, others flock to the scene. The pickings are rich—for a time. Then the birds flock to other green fields leaving a sadder, poorer but much wiser public behind. Public confidence in the old family practitioner is undermined by the suave arguments of the quack and charlatan. Even though the said public has been "stung" by the false pretender, his words sink deep because he is a past master in the art of misrepresentation.

However, the time is coming when a great organization of the laity will form to sponsor the dissemination of true and accurate medical information of an educational nature. The work already has been started by the medical profession and the great insurance companies. Eventually it will be taken over, it is believed, by the taxpayers themselves, not only in this state but in the nation at large. The reason for this belief is that the public is awakening to the necessity of health protection and is going to cooperate with the medical profession to a degree hitherto undreamed.

In conclusion, one further question comes to mind:

Why not indict these irregulars for obtaining money under false pretenses?

HELP FOR THE DOCTORS

The following editorial from the Saturday Evening Post is reprinted here by request:

"The Medical Society of the County of Kings, Brooklyn, one of the oldest in the country, has just established the interesting precedent of admitting laymen to associate membership. The avowed reasons for this novel departure are that the inclusion of influential citizens would create friends of medical progress and enable the public to assist the profession in its efforts to restrain unqualified practitioners and prevent the employment of harmful methods. Whether or not this plan will work out as effectually as its sponsors hope still remains to be seen. In the meantime it can scarcely be regarded as anything but a step in the right direction.

"There are other fields than that of popular medical education in which laymen can do much to further the efforts of physicians. Thousands of lives and vast sums of money are annually expended as tribute to unscrupulous nostrum venders. There are dozens of so-called consumption cures and cancer cures which do a tremendous amount of harm, owing to the fact that faith in them keeps persons away from competent practitioners until it is too late to save their lives. There are means of coping with this growing evil, but they are in the hands of legislators and business men and not in those of the doctors.

"There is another matter in which physicians stand in grave need of the cooperation of the lay public. Compulsory vaccination laws are under fire. Bills have been introduced in state legislatures which, if they became laws, would prevent the manufacture of smallpox vaccine, diphtheria antitoxin and most other biological products which play so large a part in modern medicine.

"If the comparative inactivity of physicians and men of science is a trustworthy index of their reaction to these attacks, even they do not perceive the reality of the menace which threatens their calling and all the millions whose lives depend upon its free and proper exercise. Unless the situation is promptly and vigorously taken in hand it will inevitably become worse before it can become better."

The following editorial from the *Medical Sentinel* of Portland, Oregon, is of interest as expressing the medical point of view:

"It is a debatable question whether the example of the Medical Society of the County of Kings, New York, to admit to associate membership laymen will be followed to any great extent throughout the country. There are arguments in its favor. It sometimes looks as though the average layman is not as much interested as he should be in preventing the passage of legislation which works against the health of the community. When members of the medical profession appear in legislative halls, and in the columns of the newspapers in protest against some of these harmful measures, they are charged

with being selfishly interested. There are many meetings of the doctors in their societies that might well be attended by influential and intelligent laymen who would thereby acquire an insight into matters concerning the great work of health promotion that they can gain in no other way. Their influence in legislative halls and in meetings of city and county officials would be most valuable after they had acquired more than a smattering of knowledge of the great progress being made in medicine and surgery. All over the country laws requiring vaccination under certain conditions are under fire, and the average layman is not as interested as he should be in the matter. It may be that the Kings County doctors have thought of something that will be found worthy of general consideration. The proposal is a novel one, and will meet with disapproval by many doctors. Meetings devoted to discussion of scientific topics will not be of sufficient interest to laymen to make them enthusiastic about attendance. But membership in the societies, carrying with it attendance at meetings where there would be discussion of matters of common interest, would certainly look as though it might be of general benefit."

THE TITLE OF DOCTOR

Probably no single piece of legislation in recent years has attracted so much attention as the Webb-Loomis bill, passed by the New York legislature and directed against medical quacks. The principal feature of the law is that none but a duly licensed practitioner who has complied with all requirements of the medical practice act may use the title of Doctor. Of secondary interest is the requirement that all licensed doctors must register each year.

New York state is confronted by a serious problem. Dr. George E. Vincent, president of the Rockefeller Foundation, in a recent public address stated that "Second story burglars are heroes when compared to medical quacks" who advertise cures for a certain disease. This statement caused the New York Times to relate that he might have gone further and extend the comparison to quacks who pretend to cure other diseases than the one he named. Also it caused Dr. Augustus S. Downing, assistant commissioner of education, to assert that there are 2,500 quack doctors in New York and applying these statistics to the comparison Dr. Vincent made, the Times says "It is to be inferred that the harm which citizens suffer in their persons from the activities of quacks is much more serious than that which they suffer from loss of property from burglary."

The Times further states that every lawmaker should have a concern for the safeguarding of the public, especially the poor and uninformed, from a charlatanry in "dealing with the most precious of human possessions—health."

ANENT MR. OTT

We are very glad to publish in another column a communication from the state compensation commissioner as his reply to an editorial in the June issue of THE JOURNAL and accept it as true with our apologies for any seeming reflection upon the integrity of the commissioner. Law is law, and those selected to execute any particular statute cannot be held personally responsible for its effect. If the doctors and private hospitals get the "butt end" of this law, they have only themselves to blame.

According to Mr. Ott's communication, hospital proprietors are "dummies" as business men when compared with the board of control and other state officials who make and execute contracts.

—C. A. R.

ANESTHETISTS MEET

The annual meeting of the Mid-Western Association of Anesthetists will be held October 11-14, 1926, at Kansas City, Mo., at the same time as the Clinic Week there. Headquarters, Baltimore Hotel. An interesting and attractive program is now in the process of making. Any physician or dentist desiring to read a paper should send the title of his paper to the secretary, Ralph M. Waters, M. D., 425 Argyle building, Kansas City, Mo.

FALSE PROPAGANDA

Attention of the professional relations committee recently was called to another incident wherein the chiropractors caused to be issued a misleading statement in regard to a "recent discovery" at Cornell University. Over a "news" story, appearing the the Huntington Advertiser of June 20, 1926, we find this heading:

NERVE PRESSURE IS CAUSE OF DISEASE

Dr. E. L. Jones, Huntington Chiropractor, Affirms Verdict of Research Men.

The "news" article follows:

"That certain diseases are caused by nerve pressure, as discovered by two physicians engaged in research work at Cornell University recently, is common knowledge of chiropractors, being the basic principal of their profession, was affirmed Saturday night by Dr. E. L. Jones, Huntington chiropractor.

"According to Dr. Jones, among the numerous diseases caused either directly or indirectly by nerve pressure, particularly in the spinal region, are nervous prostration, neuritis, diabetes. Raynaud's disease, sciatica, lumbago, neuralgia, angina pectoris and various forms of painful affections generally classified as rheumatic. All of these ailments, he said, will respond to the treatment recommended by the two physicians, which primarily is that of the chiropractor, although the discoveries were made by physicians."

Now, unfortunately, "Doctor" Jones was unaware, as was The Advertiser, that the professor of anatomy at Cornell University, some time prior to June 20 issued a statement warning against the "news" of the "discoveries." In fact, the professor's letter was published in The Journal of the A. M. A., at least eight days before the article appeared in The Advertiser. It reads:

NEWSPAPER PUBLICITY REGARDING 'ADJUSTMENT CURES' AT CORNELL UNIVERSITY

To the Editor:—It has come to my notice that there has been *widespead newspaper publicity* in regard to certain *alleged discoveries at Cornell University* of a cure for rheumatism, sciatica and numerous other diseases, and the reaction of the osteopaths, chiropractors and others to these newspaper articles makes it seem wise that there should be a statement of the facts.

An alumnus of the university and another physician of New York state, at their own request, were permitted to work in the anatomic laboratory of the Ithaca Division of the Cornell University Medical College. They desired to determine whether there was any anatomic basis that would explain a large number of symptoms which they claimed were relieved by certain manipulations which they performed. It was their opinion that these variod symptoms were caused by "sacroiliac dislocations" and that their manipulations "reduced" these.

No member of the staff of the medical college was engaged in the investigation, and the physicians conducting the inquiry *were unable to demonstrate any anatomic basis that would explain either the symptoms or the results that they claimed to obtain. I do not know the source of the newspaper story.*

ABRAM T. KERR, Ithaca, N. Y.
Professor of Anatomy, Cornell University Medical College.
Page 1855, J. A. M. A.

The above italics are ours. Immediately after the article was called to the committee's attention, Dr. Kerr's letter was transmitted to The Advertiser but thus far, the reply has not been published. We are loathe to believe that The Advertiser did not intend to publish it; rather we would think that our statement of the facts was mislaid. However, other newspapers of the state DID publish the committee's statement.

Virtually all of the component societies now have their own professional relations committees. The local chairmen should see to it that they are called upon by editors and news writers when authentic information is desired relative to news stories affecting the public health and scientific medicine.

REPORTS FROM COMPONENT SOCIETIES

Barbour-Randolph-Tucker

The Barbour-Randolph-Tucker County Medical Society met at Allegheny Heights Hospital, Davis, W. Va., on June 26th, at 6 p. m., the following being present: Drs. Butt, Miller, Bolton, Few and Irons; visitors, Drs. H. C. Miller, B. B. Miller of Eglon, W. Va., W. E. Whitesides of Parsons; U. M. Connell, Hendricks; G. A. Granger, Coketon; H. H. Davis, Kempton, Md. and Dr. Guy N. Cromwell of Davis.

In the absence of Dr. Groomes, Dr. Miller, Vice-President, presided. Owing to having two patients present, who desired to return home, they were presented.

Case No. 1—Female, eight years old: had swallowed lye when about eighteen months old, result, stricture of the lower end of the esophagus. All the food or liquids swallowed was soon emitted, except for a short period when she was able to take food which seemed to pass into stomach. She is fed twice a day through a tube inserted into stomach, which tube is removed after feeding, owing to the irritation which is complained of by child. The child is poorly nourished, is under size, but usually plays with other children as a normal child would do. She has passed through the usual childhood diseases, with no more trouble than other children.

Case No. 2—Dr. Bolton presented: Married woman, age 24, passed through three successful pregnancies, heart seriously impaired from diseased tonsils, rheumatic conditions, etc., valvular lesions, hypertrophy, etc. At times she suffers from severe pain, accompanied by cough and expectorating bloody mucous discharge. The pain is relieved by hyperdermic injections of one grain of Sul. Morphia, which does not produce sleep or nausea, as would be expected usually. This condition has existed for seven years. Her condition has been thought hopeless, and yet she has survived these years. Dr. Bolton warned us against positive diagnosis or prognosis in such cases, as we are so often liable to make what time proves to be false prognosis, and may be censured for what does not come to pass, though most reasonable might be expected.

After the clinical cases were inspected and discussed, those present were taken into the dining room where a most bountiful supper awaited us, and the high atmosphere seemed to produce almost alarming appetites. But there was sufficient to sate the most craving hunger.

After supper and smoke the program was followed.

The minutes were approved as printed in *The Journal.*

The only communication read was the one from the secretary of the secretarial organization which explained the new plan for getting new life into the County and State societies by cooperative work.

Dr. Butt asked whether there was any rule for giving digitalis. Dr. Bolton said he was guided by the condition of the patient. Dr. H. C. Miller inquired whether anyone present had observed any mental abnormalities from use of digitalis. He said he had occasionally had cases whose minds seemed to be impaired by use of digitalis. Dr. J. L. Miller suggested that in such cases aconite might relieve the symptoms. Dr. Bolton said quinadin had been recommended as a substitute, but he doubted its value.

Traumatic surgery was then discussed in a general way.

The discussion was opened by Dr. Butt. He insists that we all should be more careful in our management and treatment of our patients. He fears that most of us, especially those doing contract work become too careless in keeping posted as to best methods of treating injuries and in preventing serious or fatal complications. Small things are often fatal, and we should be vigilant. An error in diagnosis and improper or neglected treatment may cause loss of life. This is true in both medicine and surgery. He also deplores the disposition to "pass the buck to the other fellow," and shun personal respon-

sibility, citing a case of a physician who invariably "got on a drunk" when he had charge of a serious or doubtful case, and let someone else assume responsibility.

He said that when a case is found to be a hospital condition, only first aid should be attempted. He favors the removal of all destroyed tissue where possible, using short instrument, or most careful scrubbing of injured parts. He warns against reduction of fractures without anesthetic. He called attention to the danger of too tight bandaging of injuries. In applying roller bandage, do not draw it, but apply loosely. When there is marked tendency to displacement bandaging will not prevent it.

One of the most serious dangers to wounds is gas infection. Before infection of this kind sets in a strong solution of permanganate of potassium may be a valuable preventive.

In connection with this phase of infection, Dr. B. B. Miller was asked to prepare a paper to be read at our next meeting.

Amputation—When required and where? These are matters upon which physicians greatly differ. Some seem too free in exercising this means; while others possibly are too conservative. It is fair to say, save all possible, but when life is endangered be not too conservative. Let conditions and circumstances aid you in your decision.

Drs. Miller and Bolton stated that practically all their hospital cases were only attempted to be treated as first aid cases.

In gas infection the bubbling, pain, odor, color of wound are most indicative. When this kind of infection is established, no amputation is likely to be able to ward off a fatal result.

Dr. Irons reported a case of transverse presentation with detached placenta, which came into his hands through a midwife, with fatal hemorrhage in which neither ergot nor pituitin seemed to be of any good.

Society adjourned to meet in Elkins in August.

NOTES

Dr. J. H. Bailey has moved from Philippi, W. Va., to Pennsylvania.

Dr. P. L. Gray moved from Elkins June 1st to Parkersburg, where he expects to specialize in nervous and mental diseases.

The Society event of the summer was the marriage of Miss Helen Golden, the only daughter of Dr. W. W. Golden on June 9th, to Dr. Moses Paulson of Baltimore.

J. C. IRONS, *Secretary.*

Marion County

The Marion County Medical Society met in the Fairmont Y. M. C. A. Tuesday, June 29, at 7 p. m. Those present included Doctors C. L. Holland, C. L. Parks, C. O. Henry, L. D. Howard, W. F. Boyers, K. Y. Swisher, H. R. Johnson, J. R. Tuckwiller, J. J. Jenkins, J. M. Trach, A. L. Peters, L. N. Yost, E. P. Smith, C. J. Carter, C. W. Waddell, E. W. Strickler, G. R. Miller, H. R. Yost, J. M. Barr and G. H. Traugh.

Dr. Robert C. Hood of Clarksburg was the principal speaker and he gave a comprehensive report on the "Recent Progress in Contagious Diseases," dealing particularly with scarlet fever, diphtheria and whooping cough.

The question of anaphylaxis following administration of toxin-anti-toxin for diphtheria was discussed by all present. The matter of promiscuous vaccination by county health officers was considered and it was the concensus of opinion that such preventive measures should be advocated by county health officers and that the administration should be performed by family physicians.

Dr. Hood's excellent paper was discussed by Drs. Holland, Yost, Trach, Henry, Strickler, Waddell and Boyers.

Dr. Traugh gave a report of the meetings of the House of Delegates in Morgantown. He also reported the organization of the secretaries of component county medical societies, and society members were urged to write papers for monthly meetings instead of advocating the importation of speakers for these meetings.

The program committee designated Drs. Carter and L. N. Yost to prepare papers for the July meeting, with Dr. Parks as an alternate.

G. H. TRAUGH, *Secretary.*

Ohio County

One of the most remarkable features about modern physicians is their trend to go in couples or groups, as far as the social and recreative sides of their lives are concerned. Furthermore, it is to be noted men working side by side—competitors so to speak—usually go together. It speaks more eloquently than any treatise on just how far along we have advanced in our professional relations, and is a big triumph for the optimists and those who think the world may be getting a little better. So we find Dr. George Abersold and Dr. Henry F. Nolte up in the region about Saranac Lake together.

Dr. W. A. Cracraft while not aspiring to be a candidate for Bobby Jones' honors just has to attend the golf tournament at White Sulphur each year.

Dr. J. T. Thornton helps to uphold us all by showing he has a profound religious side and goes to Chicago to attend the Eucharistic conference. He feels it was one of the most stupendous happenings of all time as far as ceremonial magnificence is concerned.

Dr. W. S. Fulton rode over to see what "group golf" is like. If Fulton ever makes as good a golf player as he was a baseball pitcher in his college days no one will ever beat him by "one stroke or strike" either.

Dr. E. C. Armbrecht, while a dentist, consorts around on the golf links so much with the medical profession he is being taken for a member. He is in Camp Carlisle, D. R. C., Carlisle, Pa.

Dr. A. L. Jones has returned from a vacation spent among relatives at Fairmont, Shinnston and Mannington.

Dr. R. R. White, former interne at Ohio Valley General hospital, has gone to Shenandoah hospital, Shenandoah, Pa.

Dr. Raymond Lewellyn, also of Ohio Valley General hospital, has taken up work near Charleston, W. Va., under the guidance of Dr. McMillan.

The new internes at the Ohio Valley are Drs. Gibson, Harpfer, Pyles and Marsh. During their term a rotating service, much more comprehensive than formerly is being given its initial tryout and with the exception of an ambulance service will compare with any hospital of the same size. To give straight time in the various branches of pathology, X-ray, pediatrics, obstetrics, venereal and out patient clinics while including a comprehensive experience in medicine and surgery taxes the resource of any hospital.

Dr. Robert Reed, Jr., has started out to repeat the admirable course of his father. This reporter and Dr. Reed have had considerable argument over a certain speech the writer made, wherein he gave considerable credit for Dr. Reed's admirable course to Mrs. Robert Reed. The percentage of aid given by the aforesaid Mrs. Robert Reed, the doctor holds too high. We do not take him seriously and the reason is this, that before Robert, Jr., ever started out to do any straightforward work he promptly married Miss Dorothy Westfall at one of the most beautiful weddings we have ever seen. Which makes us think that somewhere, someplace and sometime when father and son were alone in the great open spaces Robert Jr. received some worthwhile advice.

Dr. Earl S. Phillips, brother of Dr. Edward Phillips, has just started up in the old residence of the latter, Dr Edward having moved out to his fine residence in Hawthorne Court. Dr. Earl evidently believes too that women have something to do with a physician's success, so he departed a few days ago and returned Saturday Lochinvar like with Mrs. Earl Phillips. To all these newly married men the profession of Wheeling wishes success, long and prosperous careers.

The new internes at Wheeling Hospital are Drs. W. C. Bostic, Jr., L. A. Lyon and H. Stoup. The rotating service will also be used here and every effort will be made to conform to the new standard for internship.

Dr. McClure of Wheeling Hospital has started in New Cumberland, W. Va.

Dr. Crowfield of Wheeling Hospital has located in New Martinsville, W. Va.

Dr. Thomas M. Klug has decided to join the Married Doctors' Local No. 49. The bride will be Miss Johanna Morphy, technician at Wheeling Hospital.

—H. M. H.

STATE AND GENERAL NEWS NOTES

COMPONENT SOCIETIES' SECRETARIES ORGANIZE

Herewith the minutes of the organization meeting of Secretaries of County Medical Societies at Hotel Morgan, Morgantown, W. Va., Tuesday, May 25, 1926. The following were present:

T. M. Barber, Kanawha; H. G. Steele, Mercer; J. C. Irons, Barbour-Randolph-Tucker; John Thames, Preston; R. H. Paden, Parkersburg Academy; R. G. Broaddus, Summers; F. L. Matson, Brooke; H. C. Skaggs, Fayette; C. O. Post, Harrison; G. H. Traugh, Marion and S. O. Neale, State Secretary.

The meeting was called to order by Acting Chairman H. G. Steele, G. H. Traugh acting as secretary.

Mr. Sterrett O. Neale outlined the purpose of the meeting, which was to acquaint the respective secretaries with one another. He suggested a year-end meeting and desired to know in what manner he could be of more service to the county secretaries.

Dr. Steele said that the purpose of the meeting was to get together and become better acquainted, to relate experiences as secretaries, to plan for the future work of the respective societies, and he asked which was the best plan: To propose programs for the work, monthly, several months, or annually?

Dr. Steele suggested that one man get up a program for each meeting in his particular line of work. He also suggested various symposia. He then submitted the following:

In what manner can members be persuaded to prepare papers?

How many "outsiders" should be asked to deliver addresses?

What is the best method to increase membership?

How shall we regulate dues, when paid by new members joining after the first of the year?

The status of social functions such as luncheons, banquets, picnics—whether there should be a combination social and scientific meeting?

How may the county society secretary best assist the state executive secretary?

1. Answer the correspondence promptly.
2. Insist on enough help in his office.

How best to collect society dues at the first of the year? If dues are not paid then certain members complain because they do not receive the State Medical Journal.

MR. STERRETT O. NEALE:

"The Journal can go only to those having paid up subscriptions on April 1st, otherwise the State Society will lose its second-class mailing privileges."

DR. JOHN THAMES:

"Meetings in the Preston County Society are quarterly. The doctors should get out an annual program at the first of each year. Each county society should have one annual county health program, one pediatric, etc."

DR. R. H. PADEN:

"Almost every month an 'outsider' comes in and reads a paper. Our average attendance is 50, due to our meetings being held at the noon hour, following a luncheon."

DR. CECIL POST:

"The Harrison County Program Committee had never previously functioned properly. At present our program committee consists of three members active in society work. Programs are now provided for two periods of six months each, which plan seems to function best. All our papers are by local men, and one man is appointed for discussion on each paper, also one man is appointed to give an interesting case report. On the collection of dues—all our membership dues were paid by April 1st. The best time to collect dues is at the first of the year. We hold a noon-day lunch on the date of our monthly meetings. Members are sent notices on postcards of each meeting. This noon-day luncheon has created a better feeling among our doctors."

DR. H. G. STEELE:

"How can we increase our local society's

terest in the State meetings? Possibly by selecting our best men to appear on the program of the State meetings. It would probably be better to have the young men read papers, and the older men discuss them."

Mr. Neale said that medical society dues could be charged off from income tax returns, which fact might aid in the collection of society dues the first of each year. He urged that in reporting dues received such report should be in as soon as possible in order to avoid swamping the state secretary's office.

Dr. Paden said his office assistant called each delinquent every Monday and every Thursday until the dues were paid.

Dr. John Thames stated that the state executive secretary could correspond with each society secretary and obtain information relative to those best fitted to read papers at the State Medical Society meeting. He stated that it might be an excellent idea for the county society secretaries to cooperate with the scientific program committee of the state association.

Following these discussions it was duly moved, seconded and carried to have a permanent organization of the secretaries of the component societies. The following officers were elected:

Dr. H. G. Steele, President; Dr. John Thames, Vice-President; Dr. G. H. Traugh, Secretary.

It was moved, seconded and carried to have the year end meeting in Charleston whenever the councillors hold their meeting.

It was suggested that each county should pay its secretary's expenses to the year end meeting in Charleston.

The conference thereupon adjourned.

THE INDIVIDUAL PHYSICIAN AND THE MEDICAL SOCIETY

The county medical society should perform two important functions: first, it should promote the science of medicine by providing programs for the discussion of the advances that are made from time to time in the diagnosis and treatment of disease. This work can be carried on by occasionally bringing in a clinician or teacher from outside, by inviting the physicians of neighboring cities and counties to participate in the discussion of subjects of mutual interest and by a discussion of papers and case reports presented by its own members. There is no physician in active practice who does not every week see some case or come into contact with some medical or surgical problem which would interest his fellow practitioners. A full and frank discussion of such cases and problems would be a stimulus and help to the individual members. It should not always be necessary to seek outside help in making up programs for county medical societies. The most generally useful meetings should be those in which the subject matter is presented and discussed by the members themselves. Such presentations and discussions should serve as a stimulus to further reading and more exact and careful study of cases coming to the physician for diagnosis and treatment. Secondly, it should serve to promote a more compact and sound medical organization. Organized medicine, as such, has for its problem the instruction and guidance of the public in medical matters. It must be evident that no medical organization can, as a matter of policy, deal with the needs of individuals as such, but must lay down on broad lines, principles and policies, which in their accomplishment will be of benefit to the whole medical profession and to the public at large.

It follows then that a large organization, such as the state medical society with more than two thousand members, can do more along these broader lines than a small group, such as a county society. In a still broader sense can the American Medical Association with almost a hundred thousand members wield a still broader influence.

Each member of the organization, instead of asking "What has the state medical society done for ME?" or "What has the American Medical Association done for ME?" should ask himself "What have I done to broaden the power and influence of the state and national organizations and to thereby promote a closer sympathy and understanding between the medical profession and the public which rightfully looks to us for leadership

and guidance in matters of public and private health?"

A careful and thoughtfully considered answer to this last question should determine the attitude each individual physician should take toward the policies of organized medicine.—Joseph F. Smith, M. D., in the *Wisconsin Medical Journal.*

WOMAN'S AUXILIARY IS GROWING RAPIDLY

The second annual meeting of the Woman's Auxiliary of the West Virginia Medical Association was held in Morgantown on May 25-26-27, 1926, with twenty-nine members present and forty-two visitors.

On Tuesday, May 25th, the ladies of the auxiliary registered at the Elks Club. On Wednesday morning, May 26th, the first meeting was held at 9:30 at the Woman's Club of Morgantown.

The meeting was called to order by the acting president, Mrs. W. H. St. Clair of Bluefield, and was opened with prayer by Mrs. B. S. Preston, president of the Kanawha County Auxiliary of Charleston, followed by a "welcome address" by Mrs. J. P. Lilly of Morgantown, second vice-president of West Virginia Auxiliary. Mrs. Lilly introduced Mrs. W. H. St. Clair, first vice-president of the state auxiliary, who made a very pleasing address. Next was the secretary's report, Mrs. C. M. Scott, Bluefield. Minutes of the last meeting were read and approved. Then report of the treasurer, Mrs. C. A. Ray, Charleston, followed by report of county delegates.

1. Mercer County—18 members; Mrs. A. H. Hoge, secretary, Bluefield.
2. Cabell County—22 members; Mrs. J. R. Bloss, secretary, Huntington.
3. McDowell County—13 members; Mrs. R. V. Shanklin, secretary, Gary.
4. Kanawha County—39 members; Mrs. B. S. Preston, president, Charleston.
5. Parkersburg Branch — 23 members; Mrs. George Jeffers, secretary, Parkersburg.
6. Monongalia County — 19 members; Mrs. W. B. Scherr, secretary, Morgantown.

An address was given by Dr. H. G. Steele, Bluefield, "Purpose of Ladies' Auxiliary." This was followed by discussion of membership. A motion was made to withdraw business, and passed. Mrs. J. R. Bloss of Huntington, gave a very interesting report of the meeting of the Woman's auxiliary to American Medical Association, which was held in Dallas, Texas, in April of 1926. A motion was made and properly seconded that the meeting adjourn; this motion carried.

Third day, Woman's Auxiliary, Morgantown, Thursday, May 27th, 1926:

Report of Mrs. J. R. Bloss continued; a few special points brought out such as: one object of auxiliary was to cooperate with other clubs of women. A resolution was introduced by Mrs. Swann of Huntington, as follows:

Resolved, That we, the ladies of the Woman's Auxiliary of the West Virginia State Medical Society, extend to the ladies of the Monongalia County Society, our sincerest thanks and appreciation of the wonderful hospitality and good will shown us during our visit in their city.

Resolved, That we especially thank the social committee for the lovely reception at President and Mrs. Trotter's home, and the beautiful program of music given there. Also, we extend our appreciation of the automobile ride, the luncheon, the dinner dance and the lovely morning party at the Ortolan.

MRS. WALTER SWANN,
MRS. CHAS. MORGAN,
MRS. E. B. HENSON,
MRS. DANIELS,
Resolution Committee.

Next, the acting president, Mrs. W. H. St. Clair of Bluefield, asked for nominations from the floor. Mrs. Swann of Huntington, nominated Mrs. B. S. Preston of Charleston. for president for 1927; Mrs. Barber of Charleston, seconded the motion. Mrs. B. S. Preston was unanimously elected president for the coming year. Mrs. J. R. Bloss of Huntington, spoke and made a motion for reelection of all old officers as follows:

Mrs. W. H. St. Clair, Bluefield, first vice-president.

Mrs. J. P. Lilly, Morgantown, second vice-president.

Mrs. C. M. Scott, Bluefield, secretary (corresponding and recording).

Mrs. C. A. Ray, Charleston, treasurer.

Motion was seconded by Mrs. Price of Parkersburg, was voted on and carried.

Mrs. Lilly, Morgantown, vice-president, made a motion to change article eight of the constitution, which reads as follows: Each county auxiliary shall be entitled to send one delegate and her alternate to each meeting, these accredited delegates, with the members of the executive board, to form a voting body. Each delegate shall present her receipt of dues of her county auxiliary as her credentials; to the following: Each county auxiliary shall be entitled to send one delegate and her alternate for *every fifteen* members, to each meeting, these accredited delegates, with the members of the executive board, to form a voting body. Each delegate shall present her receipt of dues of her county auxiliary as her credentials.

Following this, we had a talk by our newly elected president, Mrs. B. S. Preston of Charleston, "The Basis of All Is Fellowship," which met with enthusiasm. It was decided that our work for the next year is to be constructive work on educational lines.

A council was organized with Mrs. H. D. Price of Parkersburg, as chairman; Mrs. C. G. Morgan of Moundsville, as secretary; councillors as follows:

First district — Mrs. C. G. Morgan, Moundsville.

Second district — Mrs. W. H. Powell, Morgantown.

Third district — Mrs. H. D. Price, Parkersburg.

Fourth district — Mrs. W. C. Swann, Huntington.

Fifth district—Mrs. R. V. Shanklin, Gary.

Sixth district — Mrs. B. S. Preston, Charleston.

Plans for organizing auxiliaries throughout the state were formulated. Delegates to the American Medical Association, which meets in Washington in May, 1927, are: Mrs. R. V. Shanklin of Gary, alternate, Mrs. George Jeffers of Parkersburg; Mrs. B. S. Preston of Charleston, alternate, Mrs. W. B. Scherr of Morgantown.

An executive meeting was called at the close of the session, to formulate plans for the coming year.

MRS. C. M. SCOTT, *Secretary.*

The registration included:

MEMBERS

Mrs. P. D. Arbogast	Morgantown
Mrs. O. L. Aultz	Charleston
Mrs. J. R. Bloss	Huntington
Mrs. M. H. Brown	Morgantown
Mrs. L. W. Cobun	Morgantown
Mrs. R. P. Daniels	Pemberton
Mrs. R. H. Edmondson	Morgantown
Mrs. E. B. Henson	Charleston
Mrs. W. H. Howell	Morgantown
Mrs. David Hott	Morgantown
Mrs. George D. Jeffers	Parkersburg
Mrs. J. P. Lilly	Morgantown
Mrs. Charles G. Morgan	Moundsville
Miss Repta McBee	Morgantown
Mrs. H. C. Powell	Morgantown
Mrs. H. D. Price	Parkersburg
Mrs. B. S. Preston	Charleston
Mrs. W. C. Swann	Huntington
Mrs. J. M. Simpson	Morgantown
Mrs. Wm. B. Scherr	Morgantown
Mrs. R. V. Shanklin	Gary
Mrs. J. R. Shultz	Charleston
Mrs. C. M. Scott	Bluefield
Mrs. W. H. St. Clair	Bluefield
Mrs. E. B. Tucker	Morgantown
Mrs. S. F. Talbot	Morgantown
Mrs. H. A. Walkup	Mount Hope
Miss Gertrude Wise	Parkersburg

VISITORS

Mrs. E. L. Ambrecht	Wheeling
Mrs. J. E. Corbin	Clarksburg
Mrs. Susan Cook	Morgantown
Mrs. Edward Davis	Salem
Mrs. W. M. Davis	Bridgeport
Mrs. M. J. Fortney	Hundred
Mrs. P. A. Gibbons	Morgantown
Mrs. H. M. Hall	Wheeling
Miss Ada Hunsley	Fairmont
Mrs. D. L. Hopkins	Pennsboro
Mrs. J. R. Hughart	Morgantown
Mrs. Mary Hartman	Morgantown
Mrs. W. C. Kelly	Morgantown
Mrs. H. V. King	Morgantown
Mrs. M. F. Kirsch	Morgantown
Miss Flora Knutti	Elkins
Mrs. S. J. Morris	Morgantown
Mrs. W. C. Moser	Morgantown
Mrs. J. B. McMurray	Washington, Pa.
Mrs. A. D. Hopkins	Parkersburg
Mrs. H. T. Phillips	Wheeling
Mrs. J. P. Nolen	Ward
Mrs. R. C. Price	Morgantown

Mrs. C. O. Post.....Clarksburg
Miss Mildred Rexroad.....Elkins
Miss Isadore Stout.....Bridgeport
Mrs. L. D. Sargent.....Washington, Pa.
Mrs. B. M. Chenoweth.....Wendel
Miss Madge Swiger.....Clarksburg
Mrs. W. M. Shultz.....Fairmont
Mrs. Franklin Scanlon.....Morgantown
Mrs. W. A. Smith.....Morgantown
Mrs. A. E. Smith.....Morgantown
Mrs. A. C. Taylor.....Mona
Mrs. W. C. Thomas.....Huntington
Mrs. E. R. Taylor.....Morgantown
Mrs. J. A. Underwood.....Shinnston
Mrs. Charles Wingerter.....Wheeling
Mrs. H. A. Whisler.....Clarksburg
Mrs. C. E. Wilkinson.....Bruceton Mills
Miss Ann Yost.....Fairmont

STATE'S DEATH LIST FOR 1925 TOTALLED 17,154

(From The Charleston Mail)

The death rate in West Virginia for 1925 was 1,048 per 100,000 population, according to figures just announced at Washington by the department of commorce.

This is the first year that West Virginia statistics have been kept by the government because previous to this time, the state was not included in the registration area because of improper and lax methods of obtaining statistics.

The total number of deaths in the state from all causes for 1925 was reported at 17,154.

The highest death rate was for diseases of the heart totaling 1,745 or 107 per 100,000 population.

Death from tuberculosis, all forms, totaled 1,257 or about 77 per 100,000.

Pneumonia, all forms, to a total of 1,294 deaths or 79 to every 100,000.

Other death totals include:

Typhoid and paratyphoid fever, 334; malaria, 1; smallpox, 2; measles, 55; scarlet fever, 46; whooping cough, 177; diphtheria, 172; influenza, 399; dysentery, 213; erysipelas, 29; lethargic encephalitis, 12; meningococcus meningitis, 18.

Cancer and other malignant tumors, 881; rheumatism, 50; pellagra, 7; diabetes mellitus, 142; meningitis (nonepidemic), 119; cerebral hemorrhage and softening, 889; paralysis without specified cause, 253; diseases of the arteries, atheroma, aneurysm, etc., 168; bronchitis, 49.

Respiratory diseases other than bronchitis and pneumonia (all forms), 115; diarrhoea and enteritis, 1,569; appendicitis and typhlitis, 198; hernia, 136; cirrhosis of the liver, 50; nephritis, 1,066; puerperal septicemia, 116; puerperal causes other than puerperal septicemia, 171; congenital malformations and diseases of early infancy, 1,599; suicide, 109; homicide, 198.

Accidental and unspecified external causes, total, 1,670; burns (conflagration excepted), 183; accidental drowning, 91; accidental shooting, 41; accidental falls, 146; mine accidents, 528; machinery accidents, 34; railroad accidents, 144; collision with automobile, 8; other railroad accidents, 136; street car accidents, 9; collision with automobile, 1; other street car accidents, 8; automobile accidents (excluding collision with railroad and street cars), 208; injuries by vehicles other than railroad cars, street cars and automobiles), 12; excessive heat (burns excepted), 8; other external causes, 266; all other defined causes, 1,625; unknown or ill-defined causes, 27.

BOOK REVIEWS

A MANUEL OF NORMAL PHYSICAL SIGNS—(W. B. Blanton, M. D.) Before being able to recognize the abnormal you must know the normal. This book will be helpful to practitioners as well as students—$2.50. C. V. Mosby Company, St. Louis, Mo.

NURSERY GUIDE—(Lewis N. Sauer, Ph.D., M. D.) A splendid book for every young mother or nurse who has the care of children. The care and feeding of children, formulas and preparation of food is dealt with in plain and understandable language. Digestible and nourishing food with prophylaxis is the keynote—$2.00. C. B. Mosby Company, St. Louis, Mo.

COMMUNICATIONS

To the Editor:

At the close of the annual meeting of the State Medical Society in May was rushed through the House of Delegates, in face of very marked and large opposition, a vote which engages the endorsement of the whole Society to a projected law, taxing all sales of tobacco in the state to raise a fund for the care of the sufferers of tuberculosis.

Such legislation is most pernicious, and universally condemned by all economists. Its endorsement was refused by the Monongalia County Medical Society on this ground.

It is "class" and "special" legislation in its most reprehensible form, as it is wrong in its specialty taxed and in its special favoritism of class disbursement.

All state charges (incompetents, criminals, paupers and unfortunates of all kinds) should be maintained by general tax collected funds. Such expense must be a general charge on all citizens of the state, unless provided for by municipality or county.

There is no more justification for taxing tobacco to get money to care for the tubercular than it would be justifiable to tax all sales of perfume and powder to raise a fund for the control and care of all venereal cases in the state, etc.

As a group of intelligent men worthy of leadership in our communities we must never permit any such vicious special legislation. It was a most unfortunate and very questionable procedure of RUSH VOTING which obtained this endorsement that our medical authorities should revoke as soon as possible.

That no such undesirable precipitate vote may again engage the honorability and good sense of this Society, it would be well that in future no voting on motions be possible until such had been referred to and reported out by suitable committees.

WILLIAM S. MAGILL.

Morgantown, W. Va.

To The Editor:

As the article in the editorial column of the June issue of THE JOURNAL, entitled, "Hospitals of West Virginia," is misleading in its reference to state hospitals and the compensation department, I feel it my duty as commissioner for the compensation department to make a correction.

With all due respect to the editor, whom I know would not intentionally make a misleading statement and for whom I have the very highest regard, I feel that my daily intimate contact with the department gives me a clearer knowledge of its workings than one not so connected.

The editor states that: "The attitude and rulings of the compensation department in reference to payment of hospital fees for injured employees are rather unreasonable and unfair."

The commissioner does not arbitrarily fix fees paid to hospitals for services, but does pay what in his opinion is fair remuneration for such services as given, and in any case not to exceed the sum of eight hundred dollars. These provisions being fixed by law. This sum has been increased by enactments of the legislature from one hundred and fifty dollars to eight hundred dollars. Incidentally my experience has been that the fees paid by the compensation department for services will compare very favorably with those paid by private patients and as a whole will overbalance those paid by private patients.

Now, as to state hospitals, they are placed on the same basis as private hospitals insofar as compensation cases are concerned where the employee pays into a fund for medical or hospital services, no compensation for services is paid. This is not a ruling by the commissioner, but is a provision by law. (See Section 27, paragraph *c*, of the Compensation law.) There is nothing unfair about this as a state institution certainly has a right to sources of income that will lower its cost of maintenance, thereby lowering the burden of taxation for such purposes.

The compensation department has nothing to do with the contracts made between hospitals and industries. If a bad contract is made it is not their business, but the depart-

ment does insist that the hospitals and industries live up to the provisions of their contracts and not pass it on to the department.

Also I desire to call attention to an article under "State and General News Notes," entitled, "Compensation Ruling Being Watched." In such cases the compensation department does not rule, to the contrary they are covered by law and where the law is not clear the courts construe it, therefore, let me make it clear that the compensation department is governed by law over the enactment of which it has no control.

LEE OTT, *Commissioner*,
Workmen's Compensation
Department.
Charleston, W. Va.

SIDELIGHTS ON LAST ANNUAL MEETING

By Harry M. Hall, M. D.

A meeting of the State Association should bring to the mind suggestions or questions that might be so examined to the end that their adoption or even rejection the whole annual meetings could be improved. Doubtless we carry so-called improvements in these United States too far in every line with frequently anything but betterment as a result. Still no harm is done in looking over new things even if old style needle holders still have the popular call.

First is the suggestion that the programs are too long and are frequently a test of the President's physical endurance. If we will stop to think a moment we will recall that the meetings of the various societies at home are to say the least decidedly "high class affairs" any more. Take the Tri-State Medical meetings in the Huntington district with as we understand it over 500 present. Ohio county has had visiting medical and surgical men from big centers for two years with almost no local men. There is not the need therefore for any lengthy display of "foreign talent" at the state meetings such as there once was. State meetings are usually run like a large circus with so much that which ever wa yyou look you are bound to see something. It has been said however that most people miss the big acts by this method. Anyway it is open to debate whether a short program would not admit of a member not only hearing most of the scientific proceedings but participating in the social and other features as well.

Politics are a necessary evil. It cannot be questioned but that they spoil a meeting and this is just as true of the California State Association as it is of ours or the A. M. A. One must admit this is a star feature to some men who attend their annual sessions. It is true they are exciting, even thrilling, and bring into play all the manly qualities perhaps better than the average mix-up among the "cauliflower industry." Novertheless at best they are raucous, and subtle and shrewd and silent as some appear they are in the end a discordant although necessary note. Can they be placed in the beginning of a session? Has any one tried it? We hope some one will so that two days of peace, quiet and tranquility can sway the assembled multitude—free from the manifest nervousness of an oncoming election. It is of course a fact that many men take no interest in an election and are quite unconcerned at the outcome. This does not apply to many, who are rendered quite unfit for acceptance of the diet of wisdom set out for them.

KANAWHA COUNTY PICKS FULL TIME HEALTH CHIEF

The appointment of Dr. John Thames of Preston county, as full time health officer, and establishment of a full time health unit for Kanawha county at a total cost of $19,100 a year has been voted by the county court. Dr. Thames is a native of Arkansas.

Omer Given, president, issued a statement in which he said that one of his major ambitions since he assumed his duties as commissioner had been realized.

The appointment of Dr. Thames, who comes from Preston county, is subject to his acceptance, and to the approval of the public health council of West Virginia, which is viewed as a formality. Dr. Thames has indicated that he would accept.

The order has been pending before the

commissioners for several weeks, and more than a month ago Mr. Given said that he would bend every effort to include the health unit in the county budget this year. The court previously had appointed Dr. Roy Ray of Clendenin as health officer. Dr. Ray, however, did not accept the appointment which was to have been effective last April.

Dr. Thames has had twenty years' experience at the head of different full time health units. The majority of his experience was gained in Little Rock, Ark., his home, and for the past three years he has been at the head of the Preston county unit.

The major items in expense of maintaining the unit are Dr. Thames' salary, $4,200, and traveling expenses, $800, which total $5,000 a year; the salary, $3,000, and expenses of $800 of a full time assistant, totaling $3,800 a year; and salaries and expenses of three graduate nurses, a clerk, and the purchase of office equipment. The nurses will receive $1,800 a year, with $800 expenses. A clerk will receive $1,500 and $1,000 is provided for office equipment.

These items total $19,100 a year, and expenditures of this sum is authorized for the fiscal year closing June 30, 1927.

Assistants, nurses, and other officers connected with the unit will be selected from Kanawha county by Dr. Thames and the court.

The order entered by the court states "the state health department of West Virginia has offered to contribute the sum of $2,500 annually for the purpose of assisting in the operating expenses of the full time health unit, and $300 annually toward the salary of the full time health officer."

The order also states that "John Thames is a competent physician skilled in sanitary science and is familiar with the health work in West Virginia. This appointment is made with the understanding that the said Dr. John Thames shall give his entire time to the duties of his employment, as such health officer, and that as such health officer the said Dr. John Thames and his assistants shall look after and give their full time and attention to the general health and sanitation of Kanawha county, and render all necessary medical attention to the indigent of Kanawha county who are inmates of the county infirmary and to render full medical attention to the prisoners in the county jail of Kanawha county as may be necessary, and perform all such duties in relation to the foregoing as is now or may be hereafter prescribed by this court.

"This appointment is made with the provision that the appointment shall be accepted by the said Dr. John Thames and have the approval of the public health council of West Virginia by August 1, 1926,"

MRS. GEORGE M. LYON DIES IN HUNTINGTON

(From The Herald-Dispatch)

Myocarditis, an acute heart condition which developed four days after the birth of a daughter, caused the death Sunday, June 19, of Mrs. George M. Lyon, 28 Kings highway, Roland Park. Mrs. Lyon was formerly Miss Virginia Berkeley Sutherland. She was the daughter of Hon. and Mrs. Howard Sutherland. Her father is now United States alien property custodian and was formerly United States senator from West Virginia. Her husband, Dr. George M. Lyon, is a prominent Huntington child specialist. They were married June 24, 1922. There are three children, Virginia Berkeley, three years old, Natalie, 20 months old, and Harriet, born at St. Marys Hospital, Sunday, June 13.

Besides her husband, her children and her parents, she leaves one brother, Captain Richard K. Sutherland, head instructor in military tactics, Faribault, Minn., and four sisters: Mrs. John S. Walker, Jr., of Washington Boulevard, and Miss Katherine Sutherland, Miss Margaret Sutherland and Miss Elizabeth Sutherland of Elkins and Washington.

Mrs. Lyon was educated at Miss Madeira's school at Washington, and after she graduated there she came to Huntington to enter upon a business career, specializing in interior decoration with the Hope Hammond studio. Here she met Dr. Lyon, the son of Mrs. Harriet Lyon of Marshall College, and their engagement and marriage followed.

VIEWS EXPRESSED ON DISCUSSION OF PAPERS

Blessed is he who having nothing to say, abstains from giving wordy evidence of the fact.

On the occasion of a recent medical meeting, of which there are no end it would seem, a member arose during the discussion of a paper and announced he knew nothing of the subject under discussion and then proceeded to talk at length. Everyone knew that he knew nothing of the subject even before he announced the fact; and to everyone who did not know it, he proceeded to demonstrate it in endless verbosity. It was then that a member wrote the above quotation on a prescription blank and passed it to the writer.

Aside from the appropriateness of the epigram to the occasion it gave food for thought on the question of discussion of papers in medical societies in general. "All generalities are not true, not even this one," some one has said, but it may be ventured as a fact that the better the society the shorter the discussion — that is, the individual discussion.

It is interesting to speculate on the types of men attending medical meetings in regard to the discussion of papers. There is the type who rarely if ever discuss a paper. He may attend attentively and never take the floor. He is eager to learn, and it not infrequently happens that he is more familiar with the subject than many of his more active confreres. He sits in calm judgment evaluating the remarks of the speakers, comparing the ideas, experiences and opinions of others with his and profiting thereby. It is not egotism that prompts this attitude, but modesty—a false and unfair modesty. This man is doing the society and himself an injustice.

Then there is the silent critic. He never takes the floor, but indulges in disparaging remarks concerning the topic under discussion, or the speaker himself, to those with whom he is in contact. One of the outstanding traits of this type is that he is the first to move to adjourn, and this on the slightest provocation.

And then there is the verbose and prolific one who attempts to discuss everything and everybody. Often of ponderous voice and solemn mien, he speaks of irrelevant things or he reiterates with the finality of originality and learning the very topics which had been carefully covered in the paper. This is the one that is a menace to a society. And thus it may be repeated that the better a society the shorter the discussions.

Proper, well-timed discussion is the very life of the scientific assembly of any medical society. Without it the meeting falls flat. But what cannot be said that should be said by one discussing a paper in five minutes? Without discussion a meeting palls but, on the other hand, let it be remembered that one can be talked to death.—*The Journal of the Tennessee State Medical Association.*

[Editorial Note: All of which being true, the fact remains that discussion should be encouraged in the average medical society. A well informed, well tempered and tactful presiding officer can do much toward adding to the value of the discussion and toward helping to develop good discussants from poor ones. It will not do to measure the county medical society, or even the state medical association, and the ultra-scientific society by the same "yard stick" in this matter. Many men learn by doing. The chronic time waster or the self-booster can be largely controlled by a good presiding officer.]—*Bulletin, A. M. A.*

JOURNALS WANTED

The librarian at West Virginia University, Mr. L. D. Arnett, writes the following:

"For some years we have been binding the volumes of The West Virginia Medical Journal but our files lack four numbers. We would like to obtain these to complete volumes. Numbers missing are: October, 1916; May, July and August, 1917."

These missing issues are not available in the executive secretary's office. If any member has either or all of the missing numbers, he is asked to communicate with Mr. Arnett.

THE COUNTY SOCIETY

The great importance of the county medical society in the scheme of organized medicine is an accepted fact. It is the smallest and most fundamental unit of the American Medical Association. Apparently, then, it stands in no need of defense, but in reality the exact reverse is true. Deplorably poor attendance, inability to secure persons to present interesting and valuable medical papers and shiftlessness in the transaction of medical business are common complaints throughout the country. Further, we are led to conclude that such conditions are not materially improving but, quite to the contrary, are steadily becoming worse.

Like the fall of ancient Rome the decline in activity and influence of the county society may be attributed to as many causes as there are commentators. Here we mention only one.

Physicians are too over organized in special medical societies and hospital staffs to show a lively interest in the county society. Practically every city has its groups of specialists. These have their compulsory monthly attendance. Then there are more general medical societies which make the same requests of their members. Finally the organized hospital staffs, whether charitable or private, must be attended. Such meetings place almost unbearable demands upon the average city doctor's time. Lives there a physician who does not often ask himself what medical meetings he can best neglect? Unfortunately it is all too often the meeting of the county society.

No attempt is made to decry these special society meetings. Their purposes and results are nothing but good. But to use a well known paradox "the good is often an enemy to the best." When some scheme is worked out whereby these various societies and staffs become in some way component parts of the county society, contributing to its attendance and scientific programs, then it will become an important deliberative and scientific body. Until that time comes, it will continue to remain a more or less spiritless organization carried on largely by the last efforts of an over-organized profession.—*Colorado Medicine.*

NURSES TO MEET

Tentative plans are being made for the twentieth annual convention of the State Nurses' Association which will meet in Parkersburg September 23 and 25. A campaign to have every nurse in the state attend the convention has been started. Among those already scheduled to speak are Mayor W. E. Stout of Parkersburg; Dr. W. T. Henshaw, state health commissioner; Miss Lillian S. Clayton, Philadelphia, president of the American Nurses' Association; Miss Clara B. Noyes, director of nursing, American Red Cross; Miss M. L. Woughter, New York, representing the American Heart Association, and Rev. John Gass, rector of St. John's Episcopal church, Charleston.

CAP WILL BE DESIGNED TO SUIT U. S. ARMY NURSES

Invasion of the bobbed hair vogue into the ranks of army nurses has impelled the office of the surgeon general and that of the quartermaster general to put their heads together in an endeavor to develop a stylish and distinctive type of new millinery to fit these changed conditions in the Army Nurse Corps, says an announcement, July 16, by the Department of War.

Bobbed hair has become so prevalent among the feminine personnel of the army medical corps, the department states, that a protest has been raised against the present nurses' uniform hat, a stiff sailor, which is characterized as uncomfortable and a detriment to beauty. They also are difficult to "anchor" to short hair, it is contended.

The suggestion has been made that there be adopted a modified overseas cap which might be both becoming and comfortable, as well as more nearly approaching the present style in feminine headgear.

At the same time the department officially announced that this incident reminded them of the point that the army "can lay early claims to the bobbed hair mode." It was recited that in 1775 it was the general practice for soldiers to wear their hair in a queue.—*The United States Daily.*

THE DOCTOR'S PLAYTIME

As a class, doctors do not play enough. Their hours are long, their work depressing, and their opportunity for recreation scant. Their leisure time is apt to be devoted to medical meetings, perusal of medical literature, or study of one kind or another. Their friendships are largely among men of their own profession—when, indeed, they have time to give to friends—and all their activities center around their work.

Yet it must not be forgotten that every man needs recreation and rest if he is to remain healthy and preserve a sane attitude of mind. That "tired feeling" is more apt to come from "staleness" than from overactivity. Among no other class of professional people is a rested body and a clear mind more essential than with the men on whom other folks' lives so often depend. The doctor owes it not only to himself and to his family, but to his patients to care for his own well-being.

A hobby totally removed from the world of medicine is a most excellent thing for any physician to develop. In Paris recently the "Salon des Medecins" presented examples of paintings and sculpture executed by physicians. It was a good idea, and one worth developing in this country. Other men find their outlet in church work, clubs, golf, gardening, and varied activities. It matters not so much what vent the play instinct may have, it is the having *something* outside the regular routine to occupy the leisure hours pleasurably that is necessary to a well balanced and normal life.

The physician is about the only professional man who is on call all the time, day and night, and in this period when the eight-hour day has been recognized as practically standard for the laborer, it would appear justifiable for doctors to consider some plan that will give them certain hours of their own without fear of being disturbed. This has been one of the strong appeals of the specialties, for the specialist can regulate his hours of work better than can the general practitioner. It is also one of the strongest arguments in favor of group medicine. The members of a clinic can take their turn attending to the night work, so that all will have some opportunity to devote to their physical and spiritual betterment—in other words, to play.—*The Atlantic Medical Monthly.*

AWARD WILL BE MADE FOR RESEARCH WORK

To encourage investigations of alimentary tract function, Dr. Frank Smithies, Chicago, has presented to the School of Medicine of the University of Illinois, bonds in amount sufficient to yield annually in perpetuity, not less than $100. This fund is known as "The William Beaumont Memorial Fund" and the income therefrom, as "The Annual Beaumont Memorial Award."

The award is to be made each year to the research or clinical investigator, who, in the judgment of a faculty committee, has contributed the most important work during the year, in the field designated.

The first award will be made in 1927. Manuscripts covering investigations do not have to be entered specifically for the award nor is it required that they be submitted to the faculty committee. The award is to be granted by the committee after it has considered carefully all investigations published during any year in periodicals throughout the United States. Thus, the award is available to workers in any institution, and is not confined to members of either faculty or student body of the University of Illinois.

DR. DUNN HONORED

Recent press dispatches from Richwood relate that Dr. Hugh Dunn of the enterprising Nicholas county metropolis, has been honored by election to the presidency of the board of education there. Dr. Dunn is well known in the state. He was a delegate to the fifty-ninth annual meeting in Morgantown from the Central West Virginia Medical society.

COLLEGE ATHLETICS

To physical exercise has been assigned the role of both the cure and the cause of various bodily ills. It should be noted, however, that fitness is, or should be, a requisite for participation in athletics, particularly of the severely competitive sort, such as college games. William James[1] expressed the hope that here in America more and more the ideal of the well trained and vigorous body might be maintained neck and neck with that of the well trained mind as the coequal halves of the higher education for men and women alike. Exercise and competitive athletics are, however, not quite synonymous. One may lead to overdoing; in any event, it often calls for the utmost that strength can marshal.

The absence of the educatonal point of view in the management of school and college athletics and the emphasis on the professional, spectacular and exhibitive elements have been deplored.[2] There is little doubt that wholesome changes are being instituted extensively in our American institutions. Participation in athletic sport now has a sufficiently long history in the United States to permit a careful study of possible harmful influence on the health of the college man. It should presently be simple to ascertain whether the claims of "overstrain" and increased death rates from degenerative diseases in former athletes are in any degree warranted. A decisive answer is essential for any justifiable program of college athletics in the future.

A preliminary analysis of mortality among athletes and other graduates of a large university has recently been undertaken by Greenway and Hiscock.[3] They preface their report with the comment that for several reasons it is not surprising that the results of these longevity studies have given evidence favorable to the athlete, for he is a highly selected person. The college body as a whole presents a group selected from different communities. Students who successfully cope with the course of study and the stress of college actvities and later graduate are even more highly selected. The men who qualify physically and otherwise for a varsity team are subject to still further medical selection throughout their course. Another factor of immense importance in these studies is the basis of comparison. Comparison between college athletes and the general population, or even insured groups, may be exceedingly misleading unless standard tables representing groups of fairly similar status are utilized. Even data for average young men of corresponding ages who are accepted for life insurance must be used with extreme caution. Standards developed some years ago would obviously give the college man of recent years an unfair advantage because of the gratifying extension of the life span of the general population.

The Yale observations have been directed to determine on a fairly large scale the facts regarding the mortality of the college men who participate most actively in major sports in comparison with their associates who are not varsity men. They lead to the conclusion that the life expectancy of college graduates is somewhat higher or more favorable than that of the average young man accepted for life insurance. So far as the figures are reliable for the age groups concerned, there is no evidence to indicate injuries to the health of students by athletic sports conducted under such supervision as is enforced at Yale. It would appear that men of the type who make athletic leaders are likely to expose themselves, in war and in peace, to excesses of physical injury that are escaped by their less active associates. To secure dependable data with respect to the older age periods when degenerative diseases are more common will call for extensive statistics secured on a much more elaborate scale. Such an investigation of the longevity of college athletes is now contemplated under the auspices of a number of national organizations interested in student health.—*Journal A. M. A.*, July 17, 1926.

---

1. James, William: Talks to Teachers on Psychology, New York, Henry Holt & Co., 1916, p. 205.

2. Williams, J. F.: Personal Hygiene Applied, ed. 2, Philadelphia, W. B. Saunders Company, 1925, p. 25.

3. Greenway, J. C., and Hiscock, I. V.: Mortality Among Yale Men, Yale Alumni Weekly 35: 1086 (June 11) 1926.

REGULATIONS CONCERNING SALE OF MEDICINAL SPIRITS

Prior to his departure for Europe, Assistant Secretary of the Treasury Lincoln C. Andrews, in charge of prohibition enforcement, announced the promulgation of three new orders which are designed to assist in the enforcement of prohibition. One of the rulings provides for the use of gasoline as a part of the formula of denatured alcohol. Another order compels the return to the prohibition administrators of all filled prescriptions for the sale of medicinal alcohol, whisky and wines. This rule, it is stated, would eliminate what is known as "washing" the prescriptions and their improper use a second or third time. The third new regulation requires that all local transportation of medicinal spirits from bonded warehouses and distillers' agents to wholesale and retail druggists and from wholesale druggists to retail druggists must be by a railway express company or by a bonded commercial express company performing general transportation service in connection with rail or boat carriers. Administrators should approve railroad or boat transportation only for long hauls. General Andrews believes this will tighten the government's supervision over the movement of all alcoholic commodity. The new orders, he said, are meant to prevent the diversion of medicinal spirits to the bootleg industry, where they are largely used as flavoring for the impure liquors manufactured from alcohol and put out under various labels. —*Journal, A. M. A.*

BILLS THAT FAILED

Among the bills before Congress that failed to pass was the one to extend for an additional two years the provisions of the Shepherd-Towner law. The five year period for which this law was originally passed will expire by limitation, June 30, 1927. The House passed a bill to extend this period for two years expiring June 30, 1929, but the Senate Committee on Education and Labor reported the bill with recommendation that the extension be for one year only. Numerous efforts were made in the closing days of Congress to pass the bill in the Senate; but all efforts failed, and unless the Senate passes the bill in the short session beginning in December and ending March 4, the Sheppard-Towner law will expire, June 30, 1927. Another measure that failed was the Treasury Department bill "to strengthen the Harrison Narcotic Act." This bill was opposed by the medical profession generally on the ground that it was unreasonable. It was opposed also by druggists because it required druggists to attempt to learn whether or not a prescription signed by a physician "was issued in the course of professional practice only." The bill was permitted to remain in committee as a result of testimony presented by the National Retail Druggists Association, by wholesale drug manufacturers and by the American Medical Association. The so-called Federal Lye Bill passed the Senate, April 2, and was favorably reported to the House of Representatives by Congressman Nelson from the Committee on Interstate and Foreign Commerce, June 17. The bill, however, failed to be passed by the House.—*Journal, A. M. A.*

TUBERCULOSIS AND CANCER

It will be seen that tuberculosis has killed 96.7 per cent of its total victims before they reach the age of 65, while cancer at the same age has secured only 60 per cent of its total victims.—Newsholme, Arthur: Present Position of Tuberculosis Problem, *Lancet*, May 29, 1926.

WEDDING ANNOUNCED

Announcement of the marriage of Miss Edna Margaret Miller, daughter of Dr. and Mrs. Thomas Homer Miller of Fairmont, to Dr. Thomas Harold Copeland of Bedford, O., has been made. The wedding took place in Fairmont June 9. The bride is a descendant of a prominent northern West Virginia family. The groom is a son of Dr. T. A. Copeland of Athens, O. He attended West Virginia University and Jefferson Medical college and is a member of Alpha Kappa Kappa fraternity.

PLANS OF CHIROPRACTORS ARE OUTLINED IN LETTERS

Some idea as to the tactics employed by the chiropractors in obtaining governmental recognition may be seen from the correspondence that is published herewith. Having successfully assailed the legislatures of several states, the cult now is knocking at the doors of Congress, seeking to "make chiropractic available to each disabled veteran at government expense!"

The chiros apparently are using the same system for Congressmen and United States Senators that they used in the last West Virginia legislature. No doubt the correspondence printed here will prove enlightening to those who voted for chiropractic. As the *Illinois Medical Journal* says, the correspondence is "highly illuminating in view of the government's attempt to enter into the general practice of medicine."

Here's how the chiropractors work:

May 10, 1926.

My Dear Doctor:

Two thousand chiropractors are now working to get through Congress a law to supply chiropractic and other non-medical services to the disabled veterans who ask for such treatment at the expense of the government.

We need YOUR help. We want you to have a part in this great humanitarian service, the accomplishment of which will place your profession upon a secure national basis.

The enclosed circular tells you exactly what to do to help. In addition to the circular instructions we are asking you to print or type at once a number of letters addressed to the following Senators; have your patients and other friends sign and mail them to the Senator addressed here in Washington. Urge in your letter the immediate passage of Senate bill 4124 which provides for chiropractic treatment for the veterans. Each person should sign and mail five letters at least. One to each of the following:

Senators Reed Smoot, Richard Ernst, David Reed, Furnifold Simmons, Walter F. George. Address all, Washington, D. C.

If possible, get them to also mail one to each of their own Senators and Representatives. Get these letters streaming out of your community TODAY at the rate of 50 to 100 daily. You may have to do the addressing and mailing yourself; even so, man, jump at the opportunity and put this over RIGHT NOW. Circulate the petitions as well and mail them to me here. Prospects for victory are bright.

Sincerely,
GEORGE B. WEST,

P. O. Box 1652, Washington, D. C.

WASHINGTON OFFICE OF DR. LEO L. SPEARS

Maintained to Promote Legislation Beneficial to Disabled American Veterans

Address all Mail to GEORGE B. WEST, Post Office Box 1652

WASHINGTON, D. C.

MAKE CHIROPRACTIC AVAILABLE TO EACH DISABLED VETERAN AT GOVERNMENT EXPENSE

The writer does not purpose herein to tell of the hundreds of veterans who have gained health through chiropractic, nor of the deplorable conditions in the medical section of the Veterans Bureau, nor yet of the valiant fight of one great chiropractor against all the bureaucratic power of medicine. All these stories are written readably in another place. The thing at hand is to devise ways and means to bring victory in the present fight to require the Veterans Bureau to give chiropractic to those sick soldiers who ask for it.

The chiropractics of the nation need a great revival of the ancient crusading spirit. The science of chiropractic brings the greatest message to man since the Christian teachings were carried abroad by barefoot messengers. Christ brought the plan for the soul's salvation and peace. Chiropractic brings ease and rest to the distressed body.

This spirit of the Crusaders of old is needed to imbue the chiropractic profession of today with the will to fight lustily and successfully for national

recognition of the science; for the comprehensive usage of chiropractic in combating disease and premature death in every individual's life.

The very span of life to which man should normally aspire has been maliciously misrepresented by the minions of Satan. Satan, the greatest "surgeon" and "dope shooter" of all, slices off fifty years from each normal life span. One hundred and twenty years is the age for which every man is entitled to hope if he obeys the law of God, and keeps his backbone normal. Medical science has misrepresented mans "hope of life," alleging three score and ten as the goal with the century mark as a miracle. With the spreading of chiropractic in the last generation the average life has materially lengthened for which medicine gracefully takes all the credit. Not a single chiropractic nor chiropractic agency has raised a finger to gather the facts which will show that chiropractic is largely responsible for increasing longevity, with bettered sanitary conditions accounting for the rest of the "composite" body's success in absorbing quantities of drugs and yet living longer than formerly.

For nine years the United States Government has spent an average of one-half billion dollars annually ostensibly to rehabilitate the war wrecked men. The medical science has pocketed the bulk of this aggregate of four and one-half billions. A greater number of men have died from disease since the armistice than were killed in combat on the front. Now nine years afterward, thirty thousand of these men, just yesterday the strongest, are bed bound in diseased distress. Medical men admit that nothing can help some twenty thousand of them—the others may improve with rest and food and not too many drugs. All this time not a single chiropractor has laid hands on one of these boys with governmental permission. MANY HAVE BEEN SITUATED SO THAT THEY COULD TAKE CHIROPRACTIC WITHOUT GOVERNMENT AID—AND ARE WELL TODAY.

These are the facts and still no protest from the combined chiropractors. The fighting spirit of the Crusaders will change this supine attitude and prove to the world that chiropractic can and does make private citizens well and will do the same for these veterans.

These boys went to battle in 1917 that you and I, every American citizen, could continue a life of liberty and PURSUIT of happiness without seeking permission of a Hun, self-constituted overlord. They offered to give their lives, and flinched not at the acceptance of the offer, that our homes could continue free from Hunnish violation. We have repaid them by silently permitting the Medical Hun to stand over them with a vial of drugs and the operating knife, commanding acceptance thereof though death extended clutching fingers in their acceding.

As a plain American citizen your bounden duty is to bend every effort to break this strangle hold medicine has on the lives of these sick and suffering men. To give them indeed the choice the constitution guarantees—the right to choose additional methods for regaining health when the art of medicine has failed.

As a possessor of the knowledge and confidence of chiropractic, a mustard grain of the Crusader's spirit will impel you to never cease firing until the Government is using chiropractic throughout its health efforts.

The twenty-five thousand chiropractors receiving this message can bring nationwide usage of chiropractic in restoring to health these disabled veterans before this next June has finished its stay. Each must do his part. WILL YOU DO YOURS? We must all fight as a unit. If one fails, all are weakened. Hours lost are lives lost as these men are dying daily.

THERE IS NOT AN HOUR TO LOSE. If we fail this year it will be only because some of you have failed to "do your bit."

Here are the working plans:

Firstly, an effort is being made to get Royal C. Johnson to amend the Reed-Johnson Bill—H. R. 10240—to provide chiropractic upon the request of the veteran. Each doctor must prepare letters addressed to his own Congressman and Senators as well as to Mr. Johnson. Have every patient sign one and mail it. Where possible get the patient to write a personal letter instead. The following form is suggested:

Congressman.....

Washington, D. C.

Millions of private citizens depend upon chiropractic to regain and maintain their health. Many diseases yield to chiropractic adjustments after being pronounced incurable by finest medical authority. Thousands of our disabled veterans are now conceded by Bureau doctors to be beyond further help from medicine. We know that many of these men would be entirely restored to health and many other sufferers be eased if you will only provide skilled chiropractors to treat them.

In the light of our knowledge concerning chiropractic we implore you to so amend H. R. 10240 as to provide chiropractic at Government expense to each disabled soldier who asks for it.

Signed.....

Secondly: Get as many statements as possible from ex-service men telling of the benefits received from chiropractic. These should be sworn and where possible send in copies of M. D.'s statements of man's condition prior to taking chiropractic. Many of the men have the statements made when filing their original claim with the bureau or copies of them may be obtained from the local Red Cross' files.

These statements, the following requests, and the

signatures to the petitions will all be used to gain enough votes in Congress to pass our bill. Or to prevail upon President Coolidge to issue an executive order, the present law being broad enough to admit of it. These should be forwarded promptly to P. O. Box 1652, Washington, D. C.

Thirdly: When a disabled man comes to you for adjustments have him sign the following request. If he is afraid that the bureau medics will discriminate against him upon hearing of his request, mark the request confidential and none except the President will see it.

To the President of the United States and to Frank T. Hines, Director of the Veterans' Bureau:

Knowing of the value of chiropractic in regaining health and believing that chiropractic will help me overcome my service incurred disabilities, I hereby request permission to have Dr.....,a competent chiropractor, adjust me. Such adjustments to be paid for by the Veterans Bureau.

Signed.....

Fourthly: Place in circulation immediately the following petitions. First one to be signed by all ex-service men, the second by all other citizens. Send the accumulations of names in each week and keep up the good work.

No. 1 To the President and Congress of the United States of America:

WE, THE UNDERSIGNED, know that chiropractic is beneficial in the treatment of many diseases. We served the nation faithfully in time of war and we are proud of that service. Many thousands of our comrades in arms are still suffering from disease contracted because of like service. We are truly sorry and surprised to know that this nation so generous in other matters has failed to provide this proved aid to health for our buddies so badly in need of it.

In the light of our knowledge concerning chiropractic we respectfully petition that chiropractic be made available to all of these disabled soldiers who may ask it at the expense of the Government.

Signed.....

No. 2 To the President and Congress of the United States of America:

We, THE UNDERSIGNED, know that chiropractic has proved beneficial in the treatment of many diseases. In the light of this knowledge we respectfully petition that the Science of Chiropractic be made immediately available to all our disabled veterans who may ask it.

We are confident, because of our experience, that thousands of these boys will be restored to health and self sustaining manhood and other thousands will have their suffering materially lessened when placed under the care of competent chiropractors.

Signed.....

Fifthly: Draw resolutions similar to the following and present them to your city clubs and ex-service organizations. Invite your self or some other competent one to speak on these resolutions. Get them passed without delay.

To the President and Congress of the United States:

Whereas, chiropractic is proved efficacious in the treatment of disease by the fact that one-half million people are taking adjustments today and thirty million are believers in its use, and

Whereas, The Disabled Veterans have had nine years medical treatment with two hundred thousand yet ill, and

Whereas, They have always been denied chiropractic by the Veterans Bureau the thousands would be healed by chiropractic adjustments, therefore:

Be it resolved, that (name of organization) ask the President and Congress of the United States of America to at once make provision to supply chiropractic adjustments to each disabled veteran as may ask it.

Sixthly: Let each chiropractor become an active citizen in his community. Talking with the various candidates for Congress and getting specific pledges for our legislation. Thirty Senators and all Representatives are to be elected this fall. The primaries are scant three months away. A dozen determined men can change the result in any American community where the election is between two men of nearly equal calibre. Educate the candidates as to the merits of chiropractic. Then make it clear that your organization and your friends are going to work FOR the man who is humane and just as demonstrated by his vote, to let these helpless, sick men have every possible chance to recover their health. The legislator will see that there is only the choice between voting for bigoted, professional jealousy on the one hand or for humanitarian justice on the other.

Each one of these men will be sailing through the home district in the next sixty days. See that you and many of your patients, particularly ex-service men meet the distinguished gentleman and impress it on his mind that you are demanding justice for these suffering thousands. He will have the chance to vote in May or June. We will tell you how he voted.

A congressman at home just before election is very much more sensitive to suggestions from the voters than is true after he gets back to Washington. Be determined to win, do your share of these six things, and WE WILL WIN.

This fight to give disabled soldiers the benefit of

chiropractic adjustments at Government expense was begun five years ago by Dr. Leo L. Spears of Denver. Dr. Spears has spent $20,000 in this campaign to date. A score of courageous chiropractors have aided the cause in the past and to each one the writer extends sincere thanks. The time has arrived, however, when each individual chiropractor must get into the harness and do his share. That is the only way we can win and WIN WE MUST. The profession must stand united and work whole heartedly for the advancement of all and for this great humanitarian service.

GEORGE B. WEST, Bachelor of Science,
Colorado Agricultural College.

VETERANS OF FOREIGN WARS
of
THE UNITED STATES
Founded 1899

National Headquarters Kansas City, Kansas

WHEREAS, the Marshfield Post No. 1180, Veterans of Foreign Wars of the United States, at their regular meeting Thursday, April 15, 1926, passed the following resolution:

To the President and Congress of the United States:

WHEREAS, Chiropractic is proved efficacious in the treatment of disease, by the fact that one-half million people are taking adjustments today and thirty millions are believers in its use, and

WHEREAS, The Disabled Veterans have had nine years medical treatment with two hundred thousand yet ill, and

WHEREAS, They have always been denied chiropractic by the Veterans Bureau, though thousands would be healed by chiropractic adjustments, therefore

BE IT RESOLVED, That Marshfield Post No. 1180, Veterans of Foreign Wars of the United States, ask the President and Congress of the United States of America to at once make provision to supply chiropractic adjustments to each disabled veteran as may ask it.

CHARLES H. JOHNS, Adjutant.
PAUL J. SHEPHERD, Commander.

LEGION RESOLUTIONS

We, THE UNDERSIGNED, feel very deeply interested in Bill H. R. 10240 in its entirety, and amended form providing chiropractic for the benefit of ex-service men.

We, the ex-service men, consisting of the members in good standing of Chester R. Vickery Post No. 12, located at Dothan, Alabama, do pass this resolution:

That you support and use your influence in seeing others of your Congress, now assembled at Washington, D. C., to support Bill H. R. 10240 and its amended form as now pending before your body.

Done this 9th day of April, 1926, by Chester R. Vickery Post No. 12 of the American Legion.

(Signed) JAS. L. ACREE, Jr., Adjutant,
Chester R. Vickery Post No. 12
Dothan, Alabama.

BE IT RESOLVED, That John P. Blake Post, No. 134 American Legion ask the President and Congress of the United States of America to at once make provision to supply chiropractic adjustments to each disabled veteran as may ask it.

W. E. STITZER,
Post Commander.
J. G. SCHOELLIG,
Post Adjutant.

The above Resolutions were acted and passed upon at a regular meeting convened April 28, 1926.

THE OREGON CHIROPRACTIC ASSOCIATION, INC.

The Office of the State Secretary-Treasurer
548 Belmont Street
PORTLAND, OREGON,
April 16th, 1926.

Chiropractors Everywhere:

Gird your loins for the fray.

The fight is on for recognition by the Federal Government.

The little old state of Oregan is the first one over the top. Our quota is 150,000 names and we are getting them.

Some of you boys in thickly populated states could get 500,000 easier than we can get 150,000. GO TO IT: PEP IT UP FELLOWS.

Give the disabled veterans a chance to get well. Medicine has failed in 20,000 cases. Give chiropractic a chance. You by your letters and petitions can bring this about. For the sake of HUMANITY try it. Put your energy into this. It is a noble work and fit only for those that have the manhood to stand up and assert themselves. Do not be a laggard. BE UP AND DOING.

With all the force at my command, with all the energy I possess, God willing, I will do anything, anywhere, that will bring our beloved Science, where it can take its proper place in the sun. It is you boys, who must do it; you MUST fight, you MUST work, you MUST never quit, 'till this thing is accomplished. In this little town in the far, far West, we have seen the light and are doing our duty as we see it. WON'T YOU THEREFORE PLEASE HELP THIS GREAT CAUSE?

Get thousands of letters in to Congressman Johnson, get thousands of petitions into the hands of Mr. West. These are the weapons we must use. The AMA is not infallible, there must be a weak spot in their armor. The letters and petitions will find it. WORK: WORK: NEVER CEASING.

Always your friend,
CHAS. O. BREACH, D. C.,
State Secy.Treas. Oregon Chiropractic Assn.

THE SURGICAL CLINICS OF PARIS

By JOHN E. CANNADY, M. D.
Charleston, W. Va.

The Hotel Dieu on an island in the Seine, the Isle de la Cite, is the oldest hospital in the city, probably in Europe, aside from some in Italy. The present building is not so very old but is situated on the ancient site. It is quite large, and, like most of the Paris hospitals, is built around a court. A few hundred years ago, this hospital was a horrible pest hole with patients in tiers of bunks, three or four superimposed, one above the other. Now it is comparatively modern. The surgical service is mainly general surgical and gynecological. Hartmann is the chief surgeon. He is now rather old and inclined to be reactionary. He, like most of the French surgeons, wears long, rather heavy gloves with gauntlet sleeves. The gloves are usually sterilized with a wire or gauze form of some sort inside, to keep the fingers from sticking. Hartmann uses chloroform a great deal as an anesthetic. It is given with an inflatable rubber face mask like that part of our gas anesthesia apparatus. He apparently uses gloves to protect the patient but not to keep the surgeon's hands clean. When in a pinch, he even takes them off. I saw him removing the remains of an old, infected kidney containing stones. He was evidently having rather hard sledding, so off came the gloves. Later he drained an empyema without gloves and thoroughly contaminated his hands. Hartmann is the professor of surgery at the University of Paris. Plain catgut is generally used for deep sutures, silk in intestinal work, silkworm gut for tension sutures. The transfixion needle with the eye in the point is generally used, and speedily. The operative teamwork is good. When the transfixion needle comes through, it is threaded instantly and suturing takes place quite as rapidly or more so than when our method of needle holder, etc., is used.

We saw Ombredane at L'Hospital Enfants Malades. He, like most of the others, uses skin clips in closing, in fact, no tusures save tension sutures are used in the skin. This hospital borders on the Rue de Sevres in the Latin quarter. It is old and large, built on the pavilion plan—a dispensary is conducted in connection with it as with each of the large municipal hospitals.

I next saw the private clinic of Thierry de Martel. He was most courteous, speaks English fairly well, does more finished and modern work than I have seen elsewhere in Paris. He uses ether anesthesia given with a face mask similar to those we use for nitrous oxide or ethylene, which last I hear is being used considerably in Germany but not at all in France as yet. The ether vapor is warmed by a hot removable metal plug which is inserted in the line. He makes use of local anesthesia in a most masterful way. He is easily past master in that line of work. He did a prolonged and extensive gastroenterostomy under local anesthesia, (novocaine). There was no retching, straining or other evidence of pain or discomfort. He injects down near the plexuses supplying the mesentery of the bowel. There were no clamps on the stomach or bowel, no contamination, stomach and bowel were both evacuated by suction immediately after being opened. He used a sliding metal clip to slip over an artery forceps when clamped on an appendix stump or intestine so as to prevent contamination from the cut end. He has had the same assistant for twenty years, a most capable surgeon. He uses his secretary as second assistant, the chauffeur as operating room orderly, and so on. His private hospital at 219 Rue Vercingetorix does not have

a name but is listed in the telephone book as a "maison de sante." His operating rooms have the windows painted dark red. For operating artificial light is depended on entirely. The sciahytic light is generally used on the continent of Europe.

Another case was one of carcinoma of the rectum. He had previously performed a colostomy. He did a low abdominal exploration, then decided that it was best to extirpate the rectum by the perineal route. The anus was closed with a heavy suture which was used for traction. His dissection around the rectum was more nearly bloodless than any I have ever seen. The rectum was brought down to a point where it could be amputated well above the neoplasm. The rectum was removed after the resection of the coccyx. Large clamps were left on, the end remaining and the wound was packed with vaseline gauze. Examination of the specimen showed a tumor mass in the lumen of the bowel, about one and one-half inches in diameter. He makes more extensive use of the scalpel in dissection than I have seen elsewhere, using it often where scissors would be used by the average surgeon.

The new American hospital which had its opening May 12th, is most sumptuous, modern, roomy, and up-to-date. This hospital has sixty beds and its use is restricted to Americans and their families. There is quite an American colony in Paris. There are at least 25,000 Americans domiciled in this delightful city where one can live more comfortably at half the cost of New York. A great many of the American soldiers and officers who married French women have remained in France.

Hosptal Laroboisere on Rue Ambroise Pare is where Marion holds his big Genito Urinary Clinic. Cuneo and several other general surgeons work there. It is a picturesque building and probably represents the best type of hospital construction of its day. There are statues representing the cholera epidemic, also the founder, the Countess Lariboisere. Most, if not all, of the halls and wards have been named for famous medical and surgical worthies. Nelaton, Dupytren, Laennec and others strike the eye.

I saw Marion remove a ten-inch hemostat from the kidney stump of a very fat and uncomfortable-looking patient; the charts were very brief. I saw the records of many days on one page. While the French have greatly elaborated the things that pertain to art and cookery as applied to all forms and circumstances of life, they have apparently kept nursing detail in the charity hospitals down to its primitive essentials.

SALTPETRIERE

This is one of the oldest hospitals in the city. It was built in part in the 15th century and was used as a prison in the early days. It is very large, containing six thousand beds and is probably the largest hospital in the world. Several additions have been made in recent years. It was the scene of the professonal activities of Charcot and Pinel. Statues of both are standing in the beautiful grounds which are rather large. This hospital is on the pavilion plan, three story buildings around courts. A. Gosset has charge of the surgical department. He, as well as many of the other surgeons, had been to the Mayo clinic. His assistant spoke English quite well and asked me if I was so fortunate as to own any of the Virginia debt bonds, the ones West Virginia is now paying interest on. Said he heard that some fortunes had been cleaned up on these bonds by buying them at a few cents on the hundred and lobbying a bill through the legislature to bring about their payment.

The light therapy department was rather large and well equipped. It was in charge of a woman physician. The proportion of these in Paris is large and they, like many of the other French physicians, receive scant financial reward for their efforts.

The Pasteur Institute is a great monument to the memory of the world renowned genius who made it possible for aseptic surgery to develop. It contains a large research library and reading room. There are fine portraits of the famous workers who have made the institute what it is.

The Musee Dupytren contains a marvelous collection of pathological specimens, most of this material having been arranged by the famous physician and medico-legal expert, Orfila, in 1835. The collection is rich in extreme types. Those illustrating bone syph-

ilis, malignancies and fractures, are most notable. There are numerous "Siamese" twins, also several skulls showing the effects of sabre cuts. A number of these were contributed by Baron Larrey, chief surgeon of the Napoleonic armies.

The Broca Hospital is one of a number of hospitals that are supported by the state through the department known as the "Assistance Publique." This hospital is for women patients and was made famous by the noted gynecologist, S. Pozzi, who was chief here for many years. This hospital is unique, I think, in that the walls of the operating corridor have beautiful frescoing showing in allegory how the sick and suffering are healed. The present chief of the gynecological department, Douay, is apparently very careful and thorough in regard to his diagnosis. All these are written on a blackboard in detail before the operation. This is present in the operating room during the operation, and gives a very good check on the accuracy of the examination. Skin clips are universally used. There are no scrubbed up nurses. The technique is very simple. Transfixion needles are used and our trials with needle holders and turning needles are avoided at least. This hospital, as well as the Cochin Hospital was badly damaged by shells from the Big Bertha during the World War.

The large charity hospitals have quite large signs in front on the walls of the compound or enclosure, calling attention to the ailments treated, such as gynecology, obstetrics, hours to call, etc. There are even special clinics for sterility, also impotency, diabetics, etc.

Among the first aid stations and underground hospital quarters, those of the citadel of Verdun stand out preeminent. The underground galleries here are indeed marvelous—six miles of them, all equipped with steam heat, water, electric lights. A whole garrison city under ground. Fifteen thousand men can here be out of danger of shell fire, as these quarters are twenty feet underground. Here many war wounded were operated deliberately and with but little interference from the bombardment incident to the celebrated drive made by the German crown prince.

First aid dugouts were seen in the Champagne sector where urgent operations were done by candle, lamp, or flashlight. Many of these were not over half a mile back of the front line trenches.

DR. C. A. RAY RESIGNS AS PUBLIC POLICY CHAIRMAN

Resignation of Dr. C. A. Ray as chairman of the public policy and legislative committee has been tendered to President Bloss and accepted. Dr. R. A. Ireland of Charleston, named chairman of the committee to take office January 1, 1927, has been designated Dr. Ray's successor to serve out the unexpired term.

Dr. Ray's resignation was submitted mainly because of the load of association responsibility he now is carrying. He is chairman of the publication committee, member of the special committee in charge of the association's financial affairs, and beginning with 1927 will take over the duties of chairman of the council. Since this is election year and since the duties of the public policy and legislative committee chairman necessarily will overlap, he suggested that Dr. Ireland take up his new duties at once rather than begin January 1 and to this plan Dr. Ireland readily assented.

The fall and winter months will be busy months for the committee with the general election in November and the legislature convening early in January. Dr. Ireland contemplates calling a special meeting early in the fall to map out association's policies.

Dr. Ireland is widely known throughout West Virginia. Politically, he is a Republican and he has kept in close touch with public affairs for many years.

BOARD OF OTOLARYNGOLOGY

The next examination given by the American Board of Otolaryngology will be held in Denver, Colorado, at the University Hospital on Monday, September 13, 1926. Application should be made to the Secretary, Dr. H. W. Loeb, 1402 Grand Boulevard, St. Louis, Missouri.

The West Virginia Medical Journal

Directed and Edited by the Committee on Publication

[The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible]

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS:

WALTER E. VEST, Huntington — HARRY M. HALL, Wheeling — J. HOWARD ANDERSON, Marytown — C. W. WADDELL, Fairmont

MR. S. O. NEALE, *Secretary-Business Manager*, Charleston

Entered as Second Class Matter, January 1, 1926, at the Postoffice at Charleston, West Virginia

Volume XXII SEPTEMBER : 1926 *Number 9*

HOW A FULL-TIME HEALTH UNIT IS BENEFICIAL TO THE PRACTICE OF MEDICINE *

By JOHN THAMES, M. D.
Public Health Officer, Kingwood, W. Va.

WHEN I was solicited by your program committee to read a paper at this meeting of organized medicine in West Virginia, I was given the privilege of selecting my own subject. I am greatly indebted to the committee for the recognition, and to have the opportunity of discussing the title I have chosen, which is, indeed a rare privilege.

In dealing with this subject, the practice of medicine from an ethical organized standpoint is considered and a full time health unit is to function within the jurisdiction of public health.

That branch of medical science called public health or preventive medicine is comparatively new and has been conducted in most places, where it has been conducted at all, by physicians who were engaged in curative medicine which has caused most people to have the idea that the position of health officer is a political job of not much importance. The office is usually filled by some friend or relative of the appointing power, regardless of his qualifications, to be used by him or them as the case may be, in a way that will popularize their administration, resulting in a complete failure so far as disease prevention and health promotion is concerned. Most physcians get this impression of public health and they are perfectly justified in thinking that they are more able to take care of their cases of contagious diseases and educate the families they practice for, in hygiene and sanitation, than the fellow who gets the appointment of health officer.

* Read before the West Virginia State Medical Association, Morgantown, May 25, 1926.

The plan of fulltime health unit is only about 14 years old. There are now only about 300 counties in the United States operating on this plan, but the idea is growing very rapidly. It is accepted by the national organizations and the International Health board as the most successful plan ever adopted. The county is the unit and includes all incorporated towns under one head, unless there should be a very large city —over 100,000 population. Even then it might be more practicable to have only one health department for city and county, thereby eliminating overhead expense. The work can be performed more efficiently and economically. The health unit provides for a fulltime health officer to direct the work, whose qualifications and duties are specifically outlined by the highest authorities in public health that have been determined after a half century of close study and experimentation. It is true, no definite standards have yet been agreed upon as adaptable for all places. Geographic, climatic and industrial conditions with their varied environments are factors to be considered and, while the fundamental causes, modes of transmission and principal methods of control of diseases are the same, the practical application differs. For this reason, a successful health officer must be able to understand the circumstances, arrive at a reasonable conclusion as to what procedure will bring the best results in his community, then pursue it without fear or favor.

A health officer's duties, like that of an army surgeon are threefold. (1) *Professional*, in that he must be a regular registered physician, sufficiently trained in making physical examinations and an expert diagnostician. He should have the confidence of all physicians so that they feel free to use him in all doubtful cases of contagion; his word is final, even in smallpox. He is to hold clinics for the purpose of detecting diseases and defects, even in their incipiency and refer them to the physicians for treatment. He has to be able to decide when medical prophylaxis or artificial immunization is contra-indicated or unsafe. Therefore, he has to keep up with all the new ideas in therapeutic medicine as well as preventive medicine. He must be familiar with the Medical Practice Act, because upon him is placed the responsibility of seeing that this act is not violated. He should allow no one to practice medicine without license and require physicians to promptly report all cases of contagious diseases required to be reported under the law; isolate and placard those diseases required to be placarded and institute quarantine when necessary to protect the public.

The laws pertaining to the practice of medicine have been enacted on the recommendation of physicians of medical associations, but if a practicing physician attempts to enforce these laws, he is misunderstood by the public and it operates against his practice. It also causes the general public to think that the law is for the benefit of the doctor rather than a protection of the people. The enforcement of these laws comes under the police power of the state and when left to the average enforcement officer or a part-time health officer, who is depending upon his practice for a living, they are seldom properly enforced and the purpose for which the law was enacted is not effective. A fulltime health unit has a fulltime health officer who has state police authority by which he may enforce all acts and regulations pertaining to public health in his jurisdiction without fear that it will effect his practice or position, thereby protecting the public from charlatans, quacks and illegal practitioners. It is a well known fact that the public feel that it is their inherent right to employ whom they wish to doctor them, or none at all if they so desire. It is after they have been educated in personal hygiene and the danger of disease that they intelligently seek the advice and services of a regular legalized physician with the knowledge that he is the only safe doctor to employ.

2. *Advisory*—The health officer is a county official, the official medical adviser of all the departments of the county government and county institutions. The County Court is to be advised on all matters pertaining to the public health of the county and recommendations made for the correction of any existing nuisances that interfere with health promotion of the people, advise them and the sheriff

on the best methods of keeping the county institutions in a safe and sanitary condition that will insure health to the prisoners and inmates. He is to advise the school boards on how to construct and maintain school buildings that will be conducive to the health of the school child—then he is to advise the public of any approaching danger or threatened epidemic of disease and recommend measures for its prevention.

3. *Administrative*—The wholetime health unit is an organization for a specific purpose with a definite program and budget which requires careful and intelligent administration to insure success. The health officer is the administrative officer of the unit. The responsibility of success or failure of the project is upon him. The old idea of a health officer controlling contagion by force under police authority with strict quarantine and immediate prosecution for every slight violation has been a failure so far as prevention of the spread of disease is concerned. When a health officer, in order to relieve himself of work, furnishes the physicians with placards and asks them to placard their cases, he weakens his influence in enforcing quarantine and places the attending physician in the embarrassing position of acting officer while administering to the sick. In the same way that a judge would be if called upon to sit on a case that he had been retained to defend. The method of education and more education is accomplishing greater and more lasting results. In what way can we hope to educate the general public better than through the organized health unit composed of trained health instructors on a full time basis? Some physicians say that instruction to mothers on prenatal care and care of the baby should be given by the physician. That may be true. We never intentionally dispute them. Have the physicians done this? What opportunity have they had to do so? We all know that where no public health educational work has been done, it frequently happens that the physician is notified for the first time, after labor has begun and if he is able to make one follow-up visit with pay, he may congratulate himself. He is politely discharged with "I will let you know, Doc, when I need you." The same may be said of parents; that they are the proper ones to instruct their children in sex knowledge and sex hygiene. Have they been successful teachers? Do they know when to consult a physician? It appears not when we consider how many folks die without a doctor. It is an official record that of the four million of our young men selected to defend our flag during the World war, at lease one-third of them were found physically unfit for military duty and 75 per cent of the disabilities was the result of minor defects that could have been corrected when they were children. In all schools where medical inspections have been made, the same conditions are found to exist. Parents have to be taught the danger of these defects and urged to consult their physicians for correction.

Medical science has made wonderful progress within the last half century and probably greater during the last decade than ever before. It has advanced more rapidly than the minds of the common people can conceive and they are not going to accept a new idea that requires a radical change from the established practice, until they are taught by some definite educational program that will appeal and satisfy their minds so they will understand why these modern health measures have been adopted by the medical profession which is in keeping with medical progress. Health officers have discovered that the use of charts, posters, holding health exhibits of moving pictures, etc., distributing literature on various subjects, preparing newspaper articles and delivering lectures are very valuable as a preparation but in order to make the instruction effectual, it is necessary to supplement these with some form of demonstration. Clinics and baby conferences are held where the method of immunizing children against smallpox, diphtheria and typhoid fever can be demonstrated. This procedure brings to the minds of the people what the profession has discovered and is prepared to do what will protect their children against disease and untimely deaths. It is useless to entertain a hope of accomplishing the desired result in any other way than through the administrative efforts of a full time health unit.

To my mind, based on experience as a

health officer for many years and in different states, there is no better proof of a full-time health unit being beneficial to the practice of medicine than the way the physicians support and endorse the project in communities where it has been established. They usually cooperate with the health authorities to the fullest extent and show at all times that altruistic spirit which characterizes the medical profession.

A full-time health unit program is for the purpose of educating people in how they may prevent diseases and promote health among themselves. When they are enlightened on these subjects, personal interest is aroused and they consult the physician with a desire for information and advice. Physicians find that their instructions given to people educated along health lines are intelligently carried out and he gets the result looked for.

Health, as taught by health officials, is being in possession of a sufficient reserve force of strength and energy (vitality). Every physician and surgeon knows that his success depends more on the vital strength, or reserve force of his patient than on any surgical technique he may use or any medicine he may prescribe.

Therefore, probably the greatest benefit a full-time health unit is to the practice of medicine is creating in the minds of people the true meaning of health and how to preserve it, so that when they are overtaken by disease or injury they have strength and energy sufficient to insure a successful recovery.

DISCUSSION

DR. WALTER E. VEST, Huntington:

The idea of the county health unit has been advocated for some years, especially in the last decade, but for some time past the question has been discussed considerably among the medical profession as to the advisability of a full-time health officer, or of the advisability of health work at all. Some of the men seemed to think that the health officer is treading on the prerogatives of the medical profession, but so far as I can see there is nothing to that idea. The county health unit is here to stay, and so soon as the medical profession realizes that, and directs its activities accordingly, the better it will be. I am sure the medical profession has no quarrel at all with the health officer. The idea of health work is instruction to prevent disease. That is its function—the prevention of disease and the education of the laity—and I am sure that the proper attitude of the medical profession toward the health officer is one of cooperation, of enthusiastic and hearty cooperation. What we want to do is to cooperate with these gentlemen in their program and educate them in our work, and discuss our problems pro and con. I know of no agency that can be of more help to the physician than the health officer, and that is true even more in the small community than in the larger community. Let us work with them; let's discuss our problems with them, and get them to help us. I am sure they are all glad to lend the medical profession a helping hand.

Dr. Thames made a point which I think is paramount and which we should consider, because it is one in which we can help them. It is that the full-time health officer is the enforcement officer for the medical practice act. Last summer I happened to come in contact with the work done by Dr. Thames in Preston county. I happen to know that as the enforcement officer in Preston county he put the fear of God into those who were practicing illegally there, and chased them not only out of Preston county, but out of the state. I wish to thank Dr. Thames for the work he has done. I am sure that as soon as we get a county health unit in every county we shall be better off.

DR. B. S. RANKIN, Tunnelton:

Dr. Vest may accuse me of being a witness for the defense, being from the same county for which Dr. Thames is health officer. I would make this statement: His work needs no defense; his work stands for itself. Dr. Thames is a very efficient health officer. As Dr. Vest brought out, this work has come to stay; it is a step forward, and the medical profession has always pressed forward and always will. Dr. Vest said there are no standards; but it is, as he says, only fourteen years old, and there are only 300 counties in the United States that have it. If a subject like appendicitis can be written upon yet, how should we expect this work to be standard-

ized? We have been very fortunate in Preston county, for since this work was instituted over there we have had two very efficient men. Dr. Mustard was a very efficient man. He was there not quite a year, and was called to the Carolinas to take up special work. This is advance work, and if we have a whole-time health officer we shall have no trouble in educating our community. The Lord said we have always with us the poor, but He did not say that they have to be sick. So if Dr. Thames will take away that sickness of the poor, none of us will object.

DR. DAVID LITTLEJOHN, Charleston:

I certainly have enjoyed listening to the paper of Dr. Thames, and also to the discussion of Dr. Vest and Dr. Rankin. There was one thing Dr. Thames brought out incidentally in connection with his paper, and that is with regard to the reporting of communicable diseases. There is one aspect of that which I think has never appealed to the average physician. The condition which has existed and is existing at the present time is one which casts a reflection upon the profession of West Virginia. You know for the past year West Virginia has been in the Registration Area of the United States, and all these figures submitted to the office at Charleston are finally recognized throughout the civilized world. If you stop to think about this, you will see where the situation applies to every practicing physician in the state. Take typhoid fever, for example. We know that throughout the civilized world the average death rate is ten per cent of the cases. What do we find in West Virginia? For 1924 and 1925 we find that, instead of a death rate of ten per cent, we have a death rate of 23.5 per cent. What does that mean? It means that these men in New York or Pennsylvania or Maryland or anywhere else come to the decision that the men in West Virginia do not know a thing about the treatment of typhoid fever. But that is not the true explanation. The true explanation is that only about 25 per cent of the cases are reported, and that comes right back to the physicians themselves.

Take whooping cough, a disease looked upon with more or less disgust by the average individual. If any of you ate at the dining room of the hotel this morning you saw an indication of it. We have an average death rate of about 2.5 per cent of whooping cough cases throughout the entire Registration Area of the United States. In West Virginia, in 1924, we had a death rate of 10 per cent four times the death rate which we should have. It is not that the physicians of West Virginia are deficient in their ability to treat the diseases, but that the physicians do not realize how it is affecting them by lowering their professional dignity and standing throughout the whole civilized world. So if the health officer can put across this one idea, he is bringing to every physician in the community something which will add to his dignity and professional standing. I wish to emphasize this one fact as one of the benefits which will come from a full-time health unit in any community in which it is operated.

DR. L. N. YOST, Fairmont:

I desire to talk just a few minutes on the subject of the part-time health officer versus the whole-time health officer. Having been a part-time health officer for some time, and full-time health officer for two years, I feel that I am able to speak from experience. I wish to go on record against the part-time health officer, and speak in favor of the whole-time unit, either for one county or for a group of counties. The objection in West Virginia, as I see it, is this—that the full-time health unit is rapidly bringing the profession toward what is called state medicine. I take the ground that the health unit is only a part of the profession, the great right arm of the profession, so to speak, in an effort to organize hygiene and sanitation as laid down by the American Public Health Association and the American Medical Association. I know from practical experience that a man who is trying to practice medicine and make a living for his family, and who is at the same time a part-time health officer, trying to fulfill the duties of a full-time health officer, is going to do one of two things, either neglect his own practice or neglect the public health work for which he is paid by the taxpayers. The greatest work that can be done by the full-time

health unit is through the public schools, and the best service that can be rendered to the oncoming citizens is through a well organized health unit in the county, working through the board of education in the public schools, working through illustrated lectures, etc., and not taking the place of the medical profession at all. I hope that the time will soon come when West Virginia will be on the map for work in these lines. I know Dr. Thames, and know that he is doing good work. He has been handicapped, as have other health officers, by the fear of the medical profession that this work is directed against their interests. When the medical profession gets the true view, then we shall have a full-time health unit in every county in West Virginia.

DR. E. R. COOPER, Troy:

I had the experience at one time of being a part-time health officer, and I fully realize the handicaps under which the physician works in trying to carry out the health regulations and at the same time make a living, and before I had ever heard of a thing called a whole-time health officer I had advocated it. We have had it now for two years. At first we had some difficulties, but now we have a man who takes a more rational view and does not attempt to pull off so many stunts. It depends a great deal upon who your health officer is and his attitude. If we had men like Dr. Thames and Dr. Yost, and could eliminate all except men of their type undoubtedly this movement would become very popular and soon sweep the country.

As to the reporting of diseases, out in Gilmer county not ten per cent of the cases of measles and whooping cough are seen by physicians at all, and of course if they are not seen they can not be reported. That may seem a little startling, but I believe it is true.

DR. C. A. RAY, Charleston:

This is a subject in which I have been much interested, and for which we have laws on our statute books. There are some defects in the law, and until it is changed we will never have public health units carried out in the state of West Virginia as they should be. In looking up the statistics and the figures on the question (I am not going into figures because they are tiresome), I have gone into it far enough to know that a state levy of one per cent on the hundred dollars will furnish a full-time health officer in every county in the state of West Virginia. As the law reads now, it says that the county courts may appoint a full-time health officer. That law should be changed and read: they SHALL appoint a full-time health officer, and a state levy should be imposed, making it a state law. It should also be stated in that law that a public health doctor shall not practice curative medicine. There will be a turning point in favor of this law. It is not right for a health officer to practice medicine, for he can not do it and take care of the duties for which he is being paid. That is what we must do; in the first place, have a state levy and put it in the hands of the state public health council; and say that the public health officer must not practice medicine, and then we shall get somewhere. As it is now there is more money spent in some of the counties for health doctors, smallpox doctors, and things of that kind than would be spent for a whole-time health officer, simply because we say that the county court may do something instead of shall do something, and while we have that condition it will always be a political job.

DR. ROBERT A. ASHWORTH, Moundsville:

I wish to discuss for a few minutes public health activities. As I see the situation in West Virginia, all doctors, so far as I know, are in favor of public health units, but so far we have not been able to agree on the activities of these units. Some have thought that their duty was the quarantining of diseases, examination of milk, inspection of hotels and dairies, examination of dairy cattle, and an educational program. In some places in this state we have health officers practicing medicine in this way, giving iodin promiscuously in the schools, giving toxins and antitoxins through the schools, vaccinating the children, carrying on venereal disease clinics, taking care of the tuberculous sick, taking care of the jails, and even going so far as prescribing for the indigent poor in the communities, that, of course, being limited. That kind of program some of us

do not agree with and are entirely opposed to. Personally, I think that kind of activities on the part of the public health units is why we have only ten in West Virginia. I know of two or three that have failed on that account, but it is a wonderful thing when the health officer is the public health instructor of the county. We can agree on that, and maybe later we can agree on these other things. If I were a public health officer I should endeavor to carry on that kind of work. In our own county milk is not inspected for fat content and not inspected for bacteria. Rubbish is lying on the streets, and is obnoxious, and other conditions are bad. Sometimes I go in to see a case and find a four ounce bottle of cough mixture there, and find the health officer is treating the case. I am for the health unit, but I do think our health officers should not practice medicine.

DR. R. A. IRELAND, Charleston:

One matter to which I wish to refer is the matter of economy. We have men in Charleston studying the tax problem of the state, and they say the state is being held back by excessive taxation. I think it might be wise for this association to get before them some plan for consolidating the health activities of the cities and counties, thereby saving considerable money. In our county we are spending around $8,000 a year for the city and county. If one man did both it could be done for somewhat less than that, and, having been the city health officer for four years, I know the work overlaps.

There should be friendship established between the public health bodies of our state and this association. I do not believe we work enough together, or with enough enthusiasm for each other. If we could agree upon a program I believe we could put it over and save money for the state and do better work.

DR. C. O. HENRY, Fairmont:

The doctor from Charleston made my speech when he brought up the matter of this duplication of authority in the different counties. What Dr. Thames has said is all right, but this calling him a full-time county health officer is a misnomer. If he lived in Marion county he would not be a full-time county health officer, or in Kanawha or Harrison, simply because the larger towns, Clarksburg, Fairmont, etc., have their own officers. This association should go on record as advocating a change in the law that the county commissioners shall lay a levy, and should go further and say that when the law is amended and they have a full-time county health officer, he shall be health officer for all the county, and not for one part of the county. There is a duplication of work at present. They look to the medical profession to do something, and I do not believe there is any subject which is more pertinent today than this matter of health. We should show the people that we are in earnest and want to do something for them. Let's say that the health officer shall be the health officer for the whole county, and then doctors will not kick at paying the price for a full-time health officer.

DR. THAMES, closing the discussion:

I feel highly pleased at the attitude you have taken. It seems to me that, while Dr. Rankin was here as defense counsel, I have a good many defense counsel. My paper has accomplished all that I hoped to accomplish at this time. I had hoped, however, that some one would present the other side. I was very much pleased at what Dr. Ray said. Recently he wrote an article for *The Journal* which I have made the basis of several speeches I have delivered since then, because it was chock-full of common sense. As he says, we should make laws. "Should" is no law. Our laws say that the cattle of the state should be tuberculin tested, and some think the health officers should do that, but should is no law. We might say that mothers should feed their babies, or should be in at night, with as good effect. I hope that this association will get busy and see that the right kind of laws are enacted, and then help in their enforcement.

SOME OBSERVATIONS OF HAND INJURIES AND INFECTIONS *

By R. H. WALKER, M. D., F. A. C. S.
Charleston, W. Va.

THE IMPORTANCE of the hand has been generally overlooked by our profession.

Sir Charles Bell, of England, says, "We ought to define the hand as belonging exclusively to man, corresponding in its sensibility and relation to the endowments of the mind and especially to that ingenuity which through means of it, converts the being who is weakest in natural defenses to be the ruler over animate and inanimate nature."

The value of the hand cannot be over estimated, nor can it be fully appreciated until we have been handicapped by its loss.

A surgeon with crippled hands could not do the mechanical part of his profession, no matter what knowledge of surgery he possessed. The artist would not be able to paint pictures, the musician, the common laborer, and in fact any professional man, could not very well exist without the hand.

Beck says that the distinguishing feature between man and animal is a well developed hand.

The Developed Hand

Grasping is the chief function of the upper extremity. This function depends upon the difference in length, strength of fingers and perfect movements. We grasp objects with the whole hand, palm and digits. The digital grasp is the most difficult, but most important of all and is dependent upon perfect function of the fingers and thumbs.

The thumb is considered the lesser hand, with its diversified movements and thenar eminence which enables the hand to grasp objects with security.

The prevalence of hand injuries and the need of obtaining complete restoration of function makes their treatment of great economic importance.

The degree of disability and the time lost from work depends largely upon the proper initial treatment, early and exact recognition of the type and the site of injuries and infections.

Some idea as to the vast economic importance attached to injuries to the hand is contained in the official report of the workmen's compensation department for the fiscal year ending June 30, 1925. This report cites statistics showing that in the 365 days there were 5,427 cases of temporary disabilities for which the department paid out $80,814 in medical fees and $114,849 in compensation fees, for a total of $195,663. And this is not all! Permanent partial disabilities to the hand during the same period totalled 561 with 324,500 days lost from duty and total compensation payments for these disabilities of $304,997. Thus we have a grand total of $500,660, incurred by industries in West Virginia through injuries to the hand alone.

Surgery of the hand is a very extensive subject and cannot be treated fully in this discussion; therefore, I will not go into detail except in certain conditions.

Injury to any part of the upper extremity may compromise the usefulness of the hand.

Fractures

Most fractures which interfere with the hand are fractures of the bones of the forearm, radius and ulna, carpal and metacarpal, phalangeal, Colles' and both bones of the forearm directly opposite each other.

Fractures of both bones of the forearm directly opposite each other are very difficult to secure proper reduction and restoration

* Read in the Section on Surgery of the West Virginia State Medical Association, fifty-ninth annual meeting, at Morgantown, May 26, 1926.

of function. In most cases, open reduction with internal fixation is preferable.

The degree of interference of the hand in Colles' fracture is dependent upon the limitation of movements of the wrist and fingers. Interference with the function of wrist and fingers may be due to improper reduction of the fracture, too long immobilization, excessive callous formation and the position of the wrist in case of ankylosis. The wrist, in ankylosis, should always be in extension. The degree of function depends on whether or not the wrist is in extension. If the wrist is in flexion the strength of the hand as well as the very ability to grasp objects is interfered with materially.

Carpal fractures are more common than formerly supposed, due to the fact we are recognizing them by means of the X-ray. The proximal group of bones is frequently fractured, the scaphoid most frequently of any. Treatment of these fractures is often neglected as they are very often diagnosed as sprains of the wrist. When fractured they should be immobilized in a position of function, union takes place in three or four weeks. In non-union fragments should be removed. Dislocation of the osmagnum and semi-lunar bones, posteriorly is the most disabling of any wrist injury. It increases the antero-posterior diameter of the wrist, and seriously interferes with the movements of the fingers.

Another condition which results from carpal fractures, is the unexplainable pain. This is often of a rheumatic nature due to synovities or neuritis and often atrophy of the muscles of the forearm, thenar and hypothenar group muscles of the results.

Metacarpal and Phalangeal

Metacarpal fractures most frequently involve the second, third and fourth. A particularly bad feature is that those fractures are not always reduced and an excessive amount of callous forms, which interferes with the movements of the adjacent joints. It has been my observation that fractures of the metacarpal and phalanges are not properly treated, a serious attempt at reduction is not made and the results are most displeasing. If a general anesthetic is necessary, it should be given and as much care given to these fractures, as any fracture of the other bones of the upper extremities. We may have a very bad deformity resulting from a fracture of the humerus or of the radius or ulna with very little functional disability because the hand is not directly affected; however a simple fracture of any bone of the hand may seriously handicap the individual.

Wounds of the Hand

The wounds of the hand are classified similar to the wounds of any other part of the body. They should be regarded and treated as if already infected. There is very little shock unless there is a severe crushing injury with loss of blood. Bleeding should be controlled, but a certain amount of hemorrhage is beneficial in that it will cleanse the wound to a certain degree of foreign material. The fection is a most serious complication. The general condition of the patient should be considered, as well as the virulence of the invading organisms. A routine treatment of the wounds should be adopted by all industries.

Iodine has proven the most efficient antiseptic. It should be instilled in the wound at once and the wound protected with gauze. The skin surrounding the wound should be shaved and cleansed with benzine. The wound should be completely explored and iodine should enter every pocket. If the tissues are badly traumatized debridements should be done, conservatively. The wound should be sutured with non-absorbable material, interrupted, skin edges accurately approximated but not too tightly. Drainage is a debatable question. If you drain you anticipate infection and this is usually what happens. Personally I do not believe in drainage. The edges of the skin can be touched up with vaseline or B. I. P. to prevent too early cohesion and to permit drainage. Dressings of gauze, saturated with alcohol and glycerine, will prevent the gauze adhering to the wound, it will alleviate pain, harden the tissues, seal up lymph and prevent infection. The hand should always be placed in functional position of rest. Extensive loss of tissue can be replaced by skin grafts of various types. Amputation of fingers or parts of the hand depends upon the

damage to the soft tissues, blood vessels, nerves and bones. It is surprising how badly damaged a hand or finger may be and yet will live and return to a certain degree of function. This particularly applies to the thumb. Almost any kind of thumb is better than none. Every part of the hand should be conserved that is possible from the functional viewpoint. Fingers ankylosed in extension are in the way and should be amputated.

Infections of the hand proper are divided into superficial and deep.

Superficial infections are usually caused by minor wounds, such as puncture wounds, similar to hypodermic injections of virulent organisms.

Of the superficial infections we will consider the terminal phalanx. It is necessary to understand the anatomy of the phalanx to appreciate the clinical significance of infections of these parts. The palmar pad of fat is subdivided by connective tissue framework which extends from the surface down to the periosteum, walling off certain definite spaces, and is very sensitive.

The blood supply of the distal phalanx enters through the connective tissue framework, so that any infection involving the distal phalanx interferes with it at once causing necrosis of the bone. The flexor and extensor tendons are inserted in the base of the phalanx. Extensor tendons have no sheaths, but flexor tendons have sheaths. In infections of the distal phalanx, a lateral incision should be made extending from near the tip of fingers toward the base, taking care not to open the sheaths of the flexor tendon. By making a lateral incision all of connective tissue spaces are opened for drainage. A palmar incision will leave an ugly scar, interfere with the sense of touch and will not secure drainage.

Paronychia is an infection which involves the base of the nail, caused by hang nails or manicuring the fingers. There is pain, swelling, redness and there may be an exudation of pus. A lateral incision should be made, not involving the matrix, the base of the nail excised, flap of tissue elevated, rubber tissue drainage used, and dressed with alcohol and glycerine.

Furuncles, boils and carbuncles usually infect portions of the forearm and hands that are hairy. Infection occurs through hair follicles and sweat glands. The organisms are usually staphylococcus. Furuncles and boils generally start as pimples no larger than a pea, with a center of pus. Boils have pain of a throbbing character. Treatment—incision and drainage at once, hot applications. Double lateral incision may be necessary.

Carbuncles are multiple subcutaneous boils, and may be associated with a general disease such as diabetes or nephritis. These should be first treated with hot boric acid solution, crucial incision and drained. Squeezing of the infected points should not be done as it spreads the infection.

Collar button abscesses occur in laborers with callosities on their hands involving the web of the fingers undermining the skin on the palm and dorsum of the hand, causing a dumb-bell appearance. Treatment—incision and drainage.

Extensive infection of the hand consists of superficial and deep cellulitis, resulting from a punctured wound or slight abrasion; however it may follow secondary infection. The lymphatics of the ulna half of the forearm drain into the epitrochlear glands. Lymphatics of the radial half of the forearm drain into the axillary glands. Lymphatics of the hand drain from the palm to the dorsum. This accounts for edema of tissues on the dorsum in infections of palm of fingers and hand. The constitutional symptoms resulting from the involvement of the lymphatics of the radial side cause more grave symptoms than of the ulnar half. The deep lymphatics follow the course of the blood vessels and nerves. Abscesses are rare. Complications of the cellulitis, particularly of the deep type, are usually general septicemia and septic pneumonia and are generally fatal in persons more than 45 years of age. Treatment consists of hot application of boric acid and elevation of the arm in rest. Open abscesses when they have formed, multiple incision cannot do any good, but will actually do harm. General treatment consists of supportive measures, good food, fresh air, sunshine, an abundance of water, etc. Vaccines, serums,

and mercurochrome all have their place in treatment.

Teno-synovitis is an infection of the tendon sheath, commonly caused by puncture wounds. The tendon sheath is a definite closed sac and as such is a definite anatomical structure. The signs of infection are pain along the course of the sheath, flexion of the fingers and pain on extension. At times the sheath becomes so distended with pus that it ruptures; thus misleading in that the pain is relieved. This is analogous to the relief of pain following a rupture of the appendix. Treatment—Patient should be hospitalized. This is not a minor operation and should never be done at the office. Early incision and drainage under general anesthesia, preferably gas-oxygen. Bloodless field by use of tourniquet, and gradual removal of tourniquet in ten or twelve hours, inhibits spread of infection and general symptoms.

Incision should be made along the lateral aspect of the finger, between the joint creases. It should be ample and if necessary cross the joints. Incision of the one side of the tendon sheath is sufficient; however a double lateral incision may be necessary. Extension of infection of the tendon sheath may take place in the fascia space and is evidenced by pain points and swelling over the involved space.

Spaces

Palmar thenar space, middle and ring fingers via lumbricales space to the mid-palmar space. Little finger into the ulna bursa, thumb into the radial bursa.

It is just as important to know where to make an incision for drainage of these spaces as to know where to make an incision for the removal of the gall bladder or appendix. A thorough knowledge of the anatomy of these spaces is very essential. For drainage of the middle palmar space an incision may be extended up from the web between the middle, ring, or little finger to the distal palmar crease, thus opening the lumbricales' canal, with a hemostat passing it under flexor tendons into the mid-palmar space.

The thenar space may be opened by a curved incision about the base of the thenar group of muscles, or may be opened posteriorly in the space between the metacarpal bone of the thumb and index finger.

The thenar space by an incision just to the outer side of the hypothenar group of muscles.

Infection may extend up into the forearm, underneath the profunda group of muscles. Point of incision is just about one and one-half inch above the ulnar styloid, passing a hemostat through under the flexor profunda tendons to the radial side where a counter incision is made. This will avoid injury to the blood vessels or nerves and will adequately drain the ulnar and radial bursa of the forearm.

Dry gauze or rubber tube should never be used as drainage material. Rubber tissue drains are preferable. After treatment consists of irrigations of hot boric acid solution and other mild antiseptics. Keep hands in functional position of rest. Early passive movements are indicated.

In writing this paper I have referred frequently to the works of Mock, Moorhead, Aldee, Beck and Kanavel.

DISCUSSION

DR. J. O. RANKIN of Wheeling: I certainly appreciate the doctor's paper. He shows the importance of hand injuries, and certainly covered the subject very well. I have one or two points I would like to stress, one is as to fractures; and in infections, the importance of massage and early active and passive motion. Even just a mild fracture left in a splint and motion not started early you will find one or more fingers more or less useless. I think massaging with olive oil at the same time will greatly increase the function of the hand. Another point is the use of medullary pegs in the lower arm and metacarpals. I think the time is coming when various metal appliances will be used very little, and be replaced by bone grafts of some form. I have seen so many X-ray pictures following the use of bone plates, in which there is nonunion or delayed union where the bone peg or graft gives a much better callous formation and quicker union. Another point in the reduction of fractures is the fluroscope, which helps us get much better reductions than using the X-ray alone. In the matter of drainage, I heartily agree with the doctor in

using longitudinal incisions along the lateral side of the finger. Another point is the dislocation of the semilunar bone, which often occurs in falling where the hand is held extended. We notice a swelling and impairment of function. I think unless it is gotten early it is absolutely necessary to remove the bone on account of the scar-tissue that forms, in probably 75 to 80 per cent of the cases. I certainly thank the doctor for this interesting paper.

DR. C. G. MORGAN of Moundsville: Gentlemen: I appreciate the paper very much. This is one of the things that I think is very much neglected, and it is so simple, the human anatomy of the hand, yet so important, I think we should all inform ourselves in such a way as to be better able to take care of them. The doctor's paper was very instructive from the humanitarian standpoint, as these cases of infections are primarily among men who must necessarily make their living by labor with their hands. If we get bad results they go through life handicapped, and not able to properly care for their families. I appreciate the paper and wish to thank the doctor very much for presenting it to us.

DR. CHARLES A. GROOMES, Elkins: I would like to ask the doctor how he succeeds in using the medullary pegs for small bones in the hand and if he succeeds in using them without hand contact, the same as the larger bones of the arm, and if he usually tries to do it without hand contact?

DR. WALKER: We do not always succeed in using the intra-medullary pegs without hand contact because the pegs are very small.

INDICATIONS AND CONTRA-INDICATIONS FOR RADIUM *

By C. J. BROEMAN, M. D.
Cincinnati, Ohio

WITH THE DISCOVERY of radium in 1895, medical journals began to publish articles on its curative value. These articles, which in the last ten years have increased in number as rapidly as they have become more specialized in content, are, as a matter of course, read with interest and profit by all radium specialists. There is, however, a large group of general practitioners and surgeons not particularly interested in radium, who, through failure to study these special treatises or through an imperfect understanding of them, are without any clear idea of the possibilities of radium as a curative agent. They recognize its value in cancer, or in some few of the better-known abnormal conditions but they remain unfamiliar with a great number of cases in which radium, because of its selective action upon certain cells and upon pathological changes, has proved of the utmost benefit.

In my previous articles on (1) Radium, (2) Surface Application of Radium, (3) Radium in Non-Malignant Gynecological Conditions, (4) Radium in Dermatology, (5) Radium in Medicine, (6) Radium in Diseases of the Eye and Adnexa, (7) Syphilis and Cancer of the Lip, (8) Treatment of Inoperable Carcinoma of the Breast with Radium, the whys and wherefores have been given extended attention. To these, I refer any reader who may be disposed, to think the following statements dogmatic or onesided, or who may wish to study in detail the progress which has been made in the use of radium as a curative agent. But for those who lack time or inclination to read the specialized articles, I feel it would not be amiss to write a short paper treating concisely, in outline form, those cases in which radium has been found to be superior to other treatment, and those conditions in

* Read before the Kanawha Medical Society at Charleston, November meeting, 1925.

which it has been demonstrated as the only method of relief or cure. If this outline after reading is kept at hand, it may later prove of distinct value to the doctor called upon to consider some of the less common diseases and thus prove of great benefit to the patient.

I can only say that the statements in the following outline are based on the actual experience of radium therapists, and by far the great majority I have demonstrated to my own satisfaction in my clinical experience with radium during the past six years.

Malignant Skin Conditions

For Basal-Cell Epithelioma (or skin cancer), in all of its forms, radium is the ideal treatment. Since this condition usually occurs on the face or neck, the cosmetic end results are to be considered. The use of radium is superior to surgery here, since it results practically, neither in destroying tissue, nor in pulling of such important structures as the eye-lid or mouth. Moreover, the patient loses little, if any, time from his or her occupation, and, through not being required to stay in a hospital, is saved much expense.

The Prickle-Cell Carcinoma should be treated with radium; all adjacent glands should be irradiated whether palpable or not, and if, after thorough irradiation with radium or X-ray, they do not respond, they should be surgically removed. Surgical diathermy is of assistance in cases in which it is desirable to remove a large over-growth of malignant tissue in a shorter space of time; in cases of cancer of the ear; and in cases in which the skin has become radio-sensitive and some malignancy still remains.

Endothelioma is a condition which yields most favorably to radium treatment. It is usually associated with the Parotid Gland. In other mixed tumors of this gland, the results of the use of radium are uniformly satisfactory.

For Epithelioma of the Lip, radium is the treatment to be preferred. Cervical glands should be attended to as explained above under prickle-cell carcinoma.

Non-Malignant Skin Conditions

In Keloid (false scar), radium has proved more satisfactory than any other method, being superior even to X-ray. I have treated numerous cases of keloids following goitre operations with excellent results. The deep scar tissue and adhesions that at times follow the continual drainage or infection are also much improved, becoming more flexible. Old keloids require heavier doses of radium and disappear much more slowly than recent ones.

For Cavernous Angioma, and indeed for birthmarks in general, radium is the treatment, although it is especially satisfactory in the cavernous type, no matter how large or extensive. If one has sufficient radium on hand and it is properly applied, the results are always the same, everything that can be desired. The so-called Port-wine Nevus can be benefited very much by radium, but not so quickly, and the treatment must extend over months and in some cases even years. Spider-Nevus is most easily relieved with the electric needle. For Pigmented Nevus, radium is the best treatment we have to offer today. For Lymphangioma, too, radium is the method of choice.

When Pigmented Moles are breaking down or showing signs of changing, a state which might be interpreted as incipient malignancy, radium should be used; diathermy, when they are innocent.

For Melanomata (melanotic carcinomata) radium is the best method we have at the present time, but, even when it is properly used, its results are not always satisfactory.

Verucca (or warts) that do not yield to the ordinary treatment, such as the electric needle, or that are sensitive or in positions difficult to reach, like those under the nail, will, if treated with radium, respond promptly and satisfactorily.

In Melanonsarcoma, radium should be given first consideration.

In Lupus Erythematosis, radium is the most successful treatment.

As for Lupus Vulgaris, in looking over my records of cases of this disease that we treated with radium, I find that we have not had uniform satisfactory results, and for this reason, I would conclude that radium is no better than the various other methods used in the past for this stubborn ailment. When Lupus Vulgaris involves the mucous mem-

brane, strange as it may seem, the end results are much more gratifying.

In Hypertrichosis (superfluous hair), radium is the only treatment we have to offer in extensive cases in which a heavy growth of dark hair is found on the upper lip, chin, or cheeks of the young or older woman. I have treated some 75 cases, and I would say that improvement occurs in all of them, and that in 75 per cent of them the effect is entirely satisfactory to the patient. No scars of telangiectases result. Of course, if the hair is scattered and not very numerous the electric needle is advised. For the past few years we have discontinued the use of the electric needle for superfluous hair of the upper lip, and employ radium entirely.

Tuberculosis Varicosa Cutis (tuberculosis of the skin), responds well to radium. Other non-malignant skin diseases in which radium may be of benefit, but is by no means a treatment of choice, are: Tinea Capitis (ring worm of the scalp), Localized Eczema, Psoriasis, Keratosis, Lichenifications, Blastomycosis, Actinomycosis, Lichen Planus, Sycosis Vulgaris, Fordyce's Disease, etc.

In Pruritus Ani, localized, particularly when it is of long duration, with extensive changes like deep fissuring of the skin and recto-mucosa ulceration, radium is of distinct curative value. My most striking results in this stubborn and annoying disease were obtained in a young doctor who had consulted and received treatment from many physicians in the East as well as in Cincinnati, with no permanent relief. Although he had had this disease for years one three-hour treatment with a 50mg radium tube inserted in the rectum caused a complete and permanent cure. This result was obtained two years ago without a recurrence.

For Clavus-Callositas (corn) and various keratoses like those in Keratosis Senilis, radium is of decided benefit.

Conditions of the Head

Among nasal conditions, Cancer of the Antrum and Posterior Space should receive radium in combination with surgery; Sarcoma, radium alone.

For Chronic Ethmoiditis with recurring polypoid degeneration, radium is of marked value.

For Granulomata and Papillomata, in the external canal, radium as a rule is of much use.

For Nasal Polypus, radium is of distinct worth.

Papilloma Larynx yields brilliant results from radium treatment in certain cases, but such treatment always requires the assistance of a laryngologist.

In Cancer of the Esophagus, radium is only palliative, as we seldom see this condition early enough to obtain a complete cure.

Fibromata of the Naso-Pharynx should receive radium in combinaton with surgery.

Pathological conditions associated with eye or adnexa that are amenable to radium are: Xanthelasma, Warts, Angioma, Molluscum (simple and fibrous), Carcinoma, Trachoma, Folliculitis, Lupus Conjunctiva, Benign Tumors, Epithelioma, Sarcoma, Melano-Sarcoma, Ulcers of the Gland, Ulcers of the Cornea and Lids, Pannus, Solid Edema, Eczema of the Lids, Keratosis, Blepharitis, Squamosa (Seborrhea), Blepharitis Ulcerosa (eczema), Nevi Cataract and Blepharitis with Hypertrophy of the border of the lids; truly a large range.

Vernal or Spring Catarrh (a disease of the mucous membrane of the eyelids and the eyeball), before the discovery of radium, was deemed incurable, but the gratifying results obtained with radium in this disease are of so much importance that its use here cannot be too strongly emphasized. Few Opthalmologists, however, know that this is true, and, if they do, few see that their patients receive radium treatment.

In Trachoma, radium does not yield the same results as in Vernal Catarrah, yet it often does a great amount of good.

Sarcoma of the Cornea or other parts of the eye should receive radium first, which in some instances I have found was all that was necessary; but if the case does not do well with radium alone, surgery should be followed by more radium.

For Papilloma of the Cornea, radium is of no distinct value unless the disease is undergoing a malignant change.

Tonsils that require removal should be treated with radium, if surgery cannot be utilized or if the patient refuses to be op-

erated upon. The results are quite gratifying.

Malignant tumors of tonsils, and of both maxillae, should receive radium treatment with or without surgery.

Malignant tumors of the floor of the mouth can be better treated with radium or bare radium needles than by surgery.

For Cancer of the Tongue and Mouth, radium is the method of choice, preferable with radium seed or radium needles, depending somewhat on the locality of the growth. A well-filtered surface application before the use of the seed or needles is of benefit in localizing the growth. Cervical glands should be treated as described above.

In Leucoplakia (white patches), radium is particularly of service unless the patient has syphilis, when anti-syphilitic treatment is also necessary. Surgical diathermy, when properly applied, must also receive due consideration.

In Lingua Nigra (black tongue), a cure has been reported with radium.

Epulis of the Gums (fibrous or malignant tumor) may be cured with radium properly applied.

Gynecological Conditions—Simple

For Uterine Hemorrhage Simple, radium is the treatment of choice, particularly in women over 35 years or at the menopause. For women in the child-bearing period of life, I have used radium in the uterine cavity; but treatment must be given with caution and the patient must not receive more than 400mg hours at any one time.

In Uterine Fibroids, radium gives excellent results, particularly if the fibroid is not too large. Contra-indications are: Fibroids that extend above the umbilicus; pressure symptoms that require immediate relief; and pedunculated, suberous, or sloughing fibroids; fibroids in very young women in the child-bearing period; rapid-growing tumors suggesting sarcoma; or other malignant degeneration. For Dysmenorrhoea (painful menstruation), and the intolerable headache and other nervous manifestations that accompany this condition, radium has proved of much value. In Leukorrhea (chronic), which is an endocervicitis of non-specific origin associated with profuse discharge, properly applied radium gives excellent results. It may be necessary to repeat the treatment in two or three months. In some cases, 7 or 8 months elapses before the complete result of the treatment is noticed. Sterility can be produced with radium, but should be induced only when there is a real reason for it, when the patient's physical health, not her personal wish, demands it, and then only after two other consultants agree that it is an absolute necessity. After uterine polypus has been removed, a short application of radium will prevent its recurrence.

The contra-indications of radium in non-malignant gynecological conditions are, in acute or subacute infections such as gonorrhea, pus in the tubes and ovaries, or any pelvic inflammation, and the presence of a follicular cystic ovary.

It is also important to remember that the bowels and the bladder should be emptied before radium is inserted, and that the bladder should not be permitted to become distended while the patient is being treated.

Malignant

Carcinoma of the Uterus (Carcinoma of the fundus or body of the Uterus), if operable, should receive surgery, although a great many reliable authorities advise one treatment with radium about three weeks before the patient is operated upon. In cases that are inoperable for constitutional reason, or when the patient refuses operation, radium should be utilized. I have had some very satisfactory results with radium in fundus cases. One such patient was in the office recently; although I thought her case hopeless when I treated her four years ago, she is apparently cured today.

For Carcinoma of the Cervix, radium is the treatment of choice. There are few if any contra-indications of radium in cancer of the cervix; and the sooner the patient is treated and the less trauma the lesion receives, the better the end results will be. Quick (9), one of the foremost authorities on radium, declares: "In the best hands carcinoma of the cervix is passed out of the

operative field. I make this statement very advisably."

In Cancer of the Bladder, malignant papilloma of the bladder, cancer of the prostate and simple enlargement, radium should be used, as in some cases very gratifying results are obtained. In other cases, the disease has been retarded and distressing symptoms have been relieved.

Cancer of the Rectum is always benefitted by properly applied radium; and, while the proportion of its cures is not large, it compares favorably with surgery.

For Inoperable Carcinoma of the Breast and Operable Cases where contra-indications are present or operation is refused, radium and X-ray should be employed. It always should precede and follow breast operations when malignancy is present. Since four out of five cases with axillary involvement die from recurrent carcinoma, it is eminently desirable, in order to reduce the number of recurrences, to advise thorough, competent radiaton given by some one adequately trained. X-ray pictures should be taken of every breast case before operation or before any form of treatment is instituted, to determine if the mediastinal glands are already involved. Of course, if the mediastinal glands are involved, operaton is not considered, nor is it to be considered in cases in which the supra-clavicular and axillary glands are enlarged and fixed. Quick (9) has observed: "I believe I am safe in saying that the operable group is being steadily reduced."

For Paget's Disease of the Nipple (a chronic inflammatory affection of the areola and nipple often becoming cancerous), radium is superior to surgery, and will save many a breast amputation.

Carcinoma of the Penis, Ulva, Urethra respond favorably to radium as a rule, if treatment is begun before the case is hopelessly incurable.

In Urethral Caruncle, radium is of distinct benefit.

Miscellaneous Conditions

In Tuberculous Adenitis, radium gives very gratifying results, and I have used it satisfactorily in cases where surgery and X-ray have failed.

In Tuberculous Sinuses, radium is worthy of a trial, in some cases resulting in healing.

Carcinoma of the Testicle is another growth which yields readily to radium. Secondary glandular dissemination occurs early and is so often widespread that the ultimate end result is always doubtful. Tuberculosis of the Testicle should be treated with radium before surgery is considered. My results justify this procedure and I have on record a number of complete cures affected by radium alone.

In Spleno-Medullary Leukemia and Lymphatic Leukemia, radium is the treatment of choice, and is applied over the spleen and the enlarged lymph glands. X-ray should be used over the long bones.

For Exophthalmic Goitre, Toxic Goitre, radium as well as X-ray has definite merit. In desperate cases, it is superior to X-ray, as it can be applied at home without moving the patient out of bed and is not apt to cause the exertion or strain sometimes associated with X-ray treatment of the thyroid. Radiation of the toxic goitre should not be separated from the medical treatment for a moment, but should go hand in hand with the treatment as prescribed by the family physician. It cannot be too strongly emphasized that radiation to the thyroid, properly given, in no way excludes surgery if it is necessary at a later date.

For Enlarged Thymus Glands in Children, radium is the treatment of choice.

For Enlarged Tonsils, that for some definite reason, cannot be removed surgically, radium is of distinct value. They can be treated externally or treated directly with radon (seed) or radium needles.

In Hodgkins Disease, Lymphadenoma, radium is the treatment of choice; in fact, it is the only means today that has a decided influence on the disease. If there is a splenic enlargement, this should also be treated with surface applications of radium. If the roentgenograms show involvement of the thoracic-abdominal and pelvic lymphatics, deep X-ray should be applied to the respective areas. I have a considerable number of cases living and well, that for three, four, or five years have not been taking treatment.

Banti's Disease (splenic anemia) improves with radium, the spleen being reduced in size and some improvement occurring in the color index.

X-ray Burns, of certain types respond in satisfactory fashion where radium is properly applied. The dosage, however, is far below the dose given in other ulcerative states. I have treated a number of physicians for this very annoying affliction, and while my end results have not been entirely satisfactory, I am sure that in three cases, I have prevented the removal of one or more fingers.

Lymphosarcoma yields readily to radium, and, if the primary region can be treated early, I believe a cure is possible.

In Sarcoma and Carcinoma of the Bone, radium causes relief of pain, and in some cases temporary improvement. In Giant Cell Sarcoma, it gives the best results.

Before closing this paper, I would like to combat two fallacies. The first is that, "Radium treatment causes patients to become nervous and physical wrecks." This is not true; in fact, were the same patient to receive corresponding surgical attention, the post-operative convalescence would be severe and prolonged. The second fallacy is that, "Radium stimulates the growth of tumors." This, also, is not true, as Ewing (10), the eminent pathologist, has proved, even if the radium be given in small and divided doses.

The undercurrent of antagonism of some physicians, as well as some of the general public, due, as a rule, to ignorance of the true value and action of radium, is greatly to be deplored, as it prevents many from receiving the benefits from radium early and thus, in certain cases, prevents a complete cure.

Let us all remember that in radium we have, first of all, a curative agent in itself for a great many diseases; second, an agent which in proper combination with X-ray and surgery is at times curative; and third, an agent that in incurable conditions is capable of giving relief and prolongation of life. The patient's general condition requires just as much attention when he is being treated with radium as when he is being treated in any other way. The natural resistence of his body against cancer must be conserved. Syphilis, anemia, diabetes, arterio-sclerosis, debility and malignant cachexia, often present in malignant cases, should not be ignored, but carefully treated. Any one of the conditions named above may be the cause of an excessive reaction, hemorrhage, delayed sloughing of tissue, or refusal of the treated area to heal.

Patients should be put under systematic outdoor exercise, and partake of a proper nutritious diet, avoiding excessive proteids; besides, all the essential organs of the body, such as the kidneys and heart, should be carefully observed, and, if necessary, proper treatment should be administered.

In closing I join with surgeons in the plea: "Send your cases early, for that is the best time to cure." Remember, besides, (1) that radiotheraphy is a bloodless method entailing no mutilation; (2) that it has no primary mortality; (3) that it involves the use of no prolonged anesthetic, and in most cases requires none at all, thus conserving the strength of the patient in his fight against cancer and other diseases; (4) most important of all, that the action of its rays on malignant cells and on other pathological changes is selective, destroying many malignant cells and sickening others far beyond the reach of the most careful dissection. The normal cell requires for destruction five times the radiation that would destroy a diseased cell. Radium rays block the lymphatics, close blood channels, and cause a rapid increase of fibrous tissues throughout the tumor and surrouding organs, thus, as it were, completely walling off the malignant area.

Surely, if all physicians were familiar with the facts, radium would receive its just reward—wider use. Quick (9) has termed it "the greatest single agent at our disposal in combatting malignant disease." Yet its real value will not be shown until it is employed, not only in inoperable and incurable cases, but in those operable and curable. Then end results will show how favorably it compares with other forms of treatment, and the knife will become a second choice, yielding first place to radium.

In conclusion I would like to emphasize again, that, in the following conditions, ra-

dium is the treatment par-excellence and should be used first, the earlier the better.

Basal-cell Epithelioma, Prickle-cell Carcinoma, Endothelioma, Epithelioma of the Lip, Keloid, Angioma, Pigmented Nevus, Pigmented Moles, Lymphangioma, Lupus Erythematosus, Tuberculosis Varicosa Cutis, Vernal Catarrh, Melanosarcoma, Sarcoma of the Cornea, Cancer of the Tongue and Mouth, Inoperable carcinoma of the breast (with X-ray), Cancer of the Esophagus, Leucoplakia, Lingua Nigra, Epulis of the Gums, Simple Uterine Hemorrhage, Uterine Fibroid (certain types), Leukorrhea, Carcinoma of the Cervix, Paget's Disease of the Nipple, Tubercular Adenitis, Tuberculosis of the Testicle, Spleno-Medullary Leukemia, Lymphatic Leukemia, Enlarged Thymus in Children, Sarcoma of the Nasal Passages, Hodgkin's Disease, Banti's Disease, Lymphosarcoma.

Radium should be used in the following conditions with or without surgery or surgical diathermy.

Melanomata, Carcinoma of the Nasal Passages, Nasal Polypus, Papilloma of the Larynx, Cancer of the Esophagus, Fibromata of the Naso-Pharynx, Malignant Diseases of the Eye or Adnexa, Toxic Goitre—inoperable cases; Carcinoma of the Rectum—surgery and radium; Papilloma of the Bladder, Cancer of the Prostate, Urethral Caruncle.

The various other conditions in which radium must be given consideration and may be used in conjunction with surgery, X-ray, surgical diathermy, alpine sun-lamp or other forms of treatment, are:

Lupus Vulgaris, Hypertrichosis, Clavus, Hypertrophied Tonsils, Cancer of the Larynx, Localized Malignancies, Uterine Polypus (to prevent recurrences), Carcinoma of the Bladder, X-ray Burns, Carcinoma of the External Genitalia, Malignancies of Bones.

* * *

(1) RADIUM, C. J. Broeman, M. D., Cincinnati, Ohio. Rep. Ky. Med. Jrnl., June, 1921.

(2) SURFACE APPLICATIONS OF RADIUM, C. J. Broeman, M. D., Cincinnati, Ohio. Rep. Cincinnati Jrnl. Medicine, January, 1922.

(3) RADIUM IN NON-MALIGNANT GYNECOLOGICAL CONDITIONS, C. J. Broeman, M. D., Cincinnati, Ohio. Rep. West Va. Med. Jrnl., September, 1921.

(4) RADIUM IN DERMATOLOGY, C. J. Broeman, M. D., Cincinnati, Ohio. Rep. Ohio State Medical Jrnl., December, 1921.

(5) RADIUM IN MEDICINE, C. J. Broeman, M. D., Cincinnati, Ohio. Rep. Ohio State Med. Jrnl., April 1, 1924.

(6) RADIUM TREATMENT IN DISEASES OF THE EYE AND ADNEXA, C. J. Broeman, M. D., Cincinnati, Ohio. Rep. Ohio State Med. Jrnl., April 1, 1925.

(7) SYPHILIS AND CANCER OF THE LIP, C. J. Broeman, M. D., Cincinnati, Ohio. Rep. American Physician, July, 1925.

(8) TREATMENT OF INOPERABLE CARCINOMA OF THE BREAST WITH RADIUM, C. J. Broeman, M. D., Cincinnati, Ohio, West Virginia Medical Jrnl., March, 1926.

(9) THE RESPONSE OF VARIOUS TYPES OF CANCER TO RADIUM, Douglas Quick, M. D., The Canadian Practitioner, January, 1923, 1-9.

(10) AN ANALYSIS OF RADIATION THERAPY IN CANCER, James Ewing, M. D., Tr. Coll., Physician, Philadelphia, 1922.

SPARTAN LIFE FOUNDED NOT FOR THE INDIVIDUAL

On the whole, he taught his citizens to think nothing more disagreeable than to live by (or for) themselves. Like bees, they acted with one impulse for the public good, and always assembled about their prince. They were possessed with a thirst for honor, an enthusiasm bordering on insanity, and had not a wish but for their country. These sentiments are confirmed by some of their aphorisms. When Paedaretus lost his election for one of the three hundred, he went away rejoicing that there were three hundred better men than himself found in the city. Pisistratidas, going, with some others, ambassador to the king of Persia's lieutenants, was asked whether they came with a public commission, or on their own account, to which he answered, "If successful, for the public; if unsuccessful, for ourselves."—Monroe: Source Book of the History of Education.—Abstract in *Journal A. M. A.*

OUR PRESENT KNOWLEDGE OF ANTI-TUBERCULAR VACCINATION

By PROFESSOR A. CALMETTE,
Vice-Director of the Pasteur Institute, Paris.

Translated by
WILLIAM S. MAGILL, A. M., M. D.
Morgantown, W. Va.

GENTLEMEN: My eminent colleague, Professor F. Widal, having done me the honor to invite me to open the courses and at this first lecture of the *Journees Medicales de Paris* to sum up our present knowledge of vaccination against tuberculosis; I shall endeavor to fulfill this task; but I beg your best indulgence, for it is difficult to treat so vast a subject in the short time allotted to me.

Tuberculosis is the most fatal of human diseases, for of the total of civilized peoples, it is the cause of one-fifth of all deaths and bears particularly upon—almost exclusively—on your young children: youth; all of the first half of life's span; and therefore it is not astonishing that after the work of Pasteur, Villemin and Robert Koch, the microbiologists have multiplied their studies to discover some efficacious method of treatment or of its preventive vaccination.

They first endeavored to apply for tuberculosis infection the Pastorien processes of attenuation of virus, or to effect immunization by the aid of the products secreted by the bacillus in artificial culture media as had been so happily accomplished by Behring and by Roux, for the treatment and for the prevention of diphtheria and tetanus. But all efforts utilizing bacilli, killed or modified by heat, or by various chemical substances, or by bacillary extracts or tuberculins have failed. We now see the reason, in the fact already recognized as probable by the clinical observations of Professor Marfan, and clearly demonstrated by recent research, that antitubercular immunity differs essentially from that of most other microbian diseases.

For these which are best known to us, animal anthrax, for instance, so well studied by Pasteur, diphtheria, tetanus, typhoid fever, bacillary dysentery, cholera, pest, and many others, the refractory state results either from the spontaneous recovery from the disease or by artificial impregnation of the organism with the specific microbe, or by toxins derived therefrom.

In case of tuberculosis, as in that of syphilis, as also in certain diseases due to protozoa, such as the bovine piroplasmoses, the immunity evidenced by resistence to reinfections is shown only when the organism already harbors some form of the parasite, and on the express condition that these be in sufficiently small numbers, living and very slightly virulent to such degree as not to determine, by their presence alone and by their multiplication (too rapid for the useful exercise of the natural means of defense of the organism) any functional disturbance or severe lesion incompatible with life.

A subject, of which the lymphatic organs (for tuberculosis is essentially a disease of these organs) are parasitically affected by some bacilli insufficiently virulent and numerous, is thus provided in advance against, or if you prefer, endowed with resistance to reinfections, which persists as long as the bacilli thus protecting are neither eliminated, nor destroyed by the processes of phagocytosis. Whenever their elimination or destruction is effected, as happens in process

* The opening lecture of the "Journees Medicales de Paris" delivered at the Grand Palais des Champs Elysees, July 15, 1926. Published in extenso in La Presse Medicale, No. 57; 1926.

of time, the subject again becomes liable to an accidental virulent infection and develops an evolutive tuberculosis that is fatal, after a longer or shorter period.

Antitubercular immunity is thus bound (dependent upon) to the presence of some living, but little virulent bacilli in the organism; that is to say, to the preexistence of a slight benignant infection that is compatible with the most perfect health and which is not manifested by any other clinical sign except in a few cases, the reaction to tuberculin testing.

The extended use, especially since 1908, that has been made of this substance to reveal occult or latent tuberculosis, particularly in young children, has furnished abundant proof of the extreme diffusion of this bacillar infection throughout the world and the precocity of its infection in infancy, particularly in families of tubercular disseminators of these germs. Thus Parisot (of Nancy) has recently shown that in such infected homes, 40 per cent of the children under two years of age that have survived, and 90 per cent of those between the ages of four to ten years react to tuberculin; whereas in non-infected households such reactors are none from birth to two years and 31 per cent up to ten years of age.

This precocious bacillary infection, so often fatal, as we shall soon see, of the child nursed by its tuberculous mother, or in an infected home, is caused by the absorption almost daily, by its mucosa—particularly that of the digestive tract—of a more or less number of bacilli of which the virulence is the greater as they come from patients of evolutive lesions or excretors of the microbes in great quantities. Besides, this absorption by the digestive tract in early infancy is extremely facilitated by the fact that the intestinal mucosa of the nursing child—particularly in the first weeks of life—permits its penetration, not only by masses of microbes, but even by albuminoid substances and by antitoxins; as the experiments of Disse demonstrated long ago, as was also confirmed by Erlich. We shall see presently, that the method of vaccination by the BCG (Bile Calmette Guerin cultured bacillus) utilizes exactly this phenomenon to bring about the impregnation of the lymphatic system of the newborn child, as soon as born, with a living bacillus deprived of virulence and incapable of provoking tubercular lesions.

The tuberculin reactions have taught us that in all countries of old civilization, today almost no person reaches adult age and escapes a bacillary infection. Of the large number of persons that the tuberculin reaction obliges us to consider as harboring the bacilli as parasites, only one in five succumbs to tubercular disease. The four others remain perfectly immune and show evident resistance to the reinfections to which they are, or have been exposed; in particular those who live together with the tuberculous who are distributors of bacilli.

Observations made in veterinary medicine, and experimental studies show this is equally true in animals sensitive to tubercular infection.

It would seem therefore evident that if one wished to produce this state of particular resistance—in subjects thus far immune—to reinfection which is characteristic of antitubercular immunity; it would be necessary at the earliest age, in fact with newborn, to colonize their lymphatic organs with some bacilli—the least offensive possible; but living (dead bacilli and bacillary extracts conferring no power of protection) and it seems that here would be the obstacle against which have butted almost all experimenters.

Until recent years, the only attempts which have approached this end are those of Behring, who proposed in 1902 to vaccinate calves of from three to six months of age, by injecting into their veins two doses—at a six weeks' interval—of a small amount of tubercular bacilli of human origin, of which the virulence for animals of the bovine race is very feeble, although quite the contrary for man. This "Jennerization" of animals of the bovine race as designated (improperly) by its initiator has been the object of wide experimentation and important application to herds in various countries. The conclusion stands that the bovo-vaccin of Behring effectively gives to calves an appreciable resistance to the various kinds of natural or artificial infection; but that this

resistance—of short duration, since it does not exceed fourteen months—manifest as long as it persists, by the more or less complete absence of tubercular lesions, does not however go to the point of permitting the organism to absorb the virulent bacilli of tests, nor even those introduced for purpose of vaccination. Both varieties are retained to some degree for months in the lymphatic ganglia, liable to signal their presence more or less suddenly by anatomical disorders whenever the resistance artificially created by the vaccination is at the point of yielding.

Besides, it has been established, in particular by the studies of A. Stanley Griffith in England; and C. Titze in Germany, that the vaccinated animals eliminate for a long period, intermittently by their excreta, and in cases of milch cows, by their mammary glands, tubercular bacilli which retain the characteristics and type of human tuberculosis. Such an elimination offers great danger to man and has therefore caused the complete abandonment of the method.

The same difficulties have caused the rejection of similar processes, proposed by Robert Koch, who used a bacillus of bovine type but of little virulence; and by S. Arloing (of Lyons) who used the human type of bacilli in homogenous culture; and by Theobald Smith, who injected subjects of the bovine race intravenously with a single dose of 1 to 2 milligrams of the bovine type of bacillus attenuated by ageing.

A number of experimenters have chosen a bacillus of the tuberculosis of the avian race; but besides the fact that this bacillus is virulent for certain mammals, particularly the hog, horse, rabbit and sometimes man, it does not appear to confer any appreciable resistance to the bacilli of either the human or the bovine type. Vallee (of Alfort) actually uses for his vaccination against bovine tuberculosis, a bacillus very akin, if not identical to that of avian tuberculosis but of hippic origin, in what he calls an unabsorbable excipient the objects of which is to retard the absorption of the microbes; on the presence of which the resistance to reinfection seems to depend.

More recently, considerable attention has been excited in Germany by the efforts of Friedmann with an acido-resistant bacillus isolated from a fresh water turtle from an aquarium in Berlin. With this type it was claimed not only to obtain a preventive vaccination; but also a curative effect on established tuberculosis. It did not take long to show the fallacy of these claims and the so-called "Friedmann's Remedy" was soon abandoned.

There was some hope of progress by sensibilizing living bacilli with rich sera with antibodies from animals tuberculized and treated with the dead bacilli or their extracts; but the results showed that such sensibilized bacilli instead of vacinnating caused a more rapid infection than even the untreated bacilli could.

Another trial, somewhat hazardous, was made by Gerald Webb and W. William, who proposed to inject very minute doses of virulent bacilli, "bacilli units," to the point of realizing a latent infection, similar to that caused spontaneously by slight contamination and to thus protect against reinfections. But this method, never used outside of the laboratory, is evidently too dangerous to be accepted in practice.

A well known Spanish scientist, Jaime Ferran, of Barcelona, for some years directs his efforts of vaccination by means of a bacillus similar to Bacterium Coli, which he states was derived from the tubercle bacillus by serial "mutations"; but this bacterium has none of the characteristics of the Koch bacillus duly authenticated and we have no proof of its derivation therefrom, nor that it exercises any protective function that is efficacious against a virulent infection in animals sensitive thereto. Therefor we cannot now judge in any way the experiments carried out directly on man by Ferran.

The principles on which is based the process of antitubercular vaccination, as studied by the Pasteur Institute, and which it endeavors to bring into application for the preservation of newborn children, are all different from those thus far proposed in our efforts of immunization of animals. One must take into account both that experiment and results of tuberculin testing of subjects of all ages have taught us the relative pro-

tection role of only living bacilli, and the precocity as well as the gravity of tubercular infection of young subjects.

Morover, the necessity of recourse to living bacilli to bring about this particular state of resistance to reinfections which characterize antitubercular immunity; obliges the choice, as did Pasteur for the anthrax infection, of laboratory procedure to transform the tubercle bacillus while living, from that of tubercular genetic propensity to that of a bacillus capable of living in symbiosis with the lymphatic cells of the organism without detemining tubercular lesions.

Research in this direction, after many trials, led to the cultivation of tubercle bacilli in pure ox-bile to which 5 per cent glycerine had been added. This extremely alkaline medium swells and saponifies the waxy-fat shell of the microbic elements without detriment to their vitality.

After 230 successive cultures, carried out in thirteen years, the bacilli that were originally very virulent for the bovine race have become almost inoffensve even in intense doses, for all kinds of animals, including the anthropoids. Whatever route for experimental infection is chosen; ingestion, sub-cutaneous inoculation, intraperitoneal or intravenous, one no longer can determine therewith the formation of extensive nor serially transmissible tubercular lesions. Returned to the usual media these remain avirulents, although they secrete tuberculin as did their virulent ancestors, and in animals injected with relatively massive doses they determine the Koch phenomenon and the formation of specific antibodies that are demonstrable by the Bordet-Gengou fixation reaction.

This race of bacilli, today known under the denomination of BCG (Bile Bacillus Calmette Guerin) is perfectly tolerated even in intravenous injections, by all tuberculidable animals and by man; its elimination and dispersion to outside media therefore constitutes no detriment nor danger as would be the case for the human, bovine, avian and equine types; all more or less virulent and tuberculigenous, which have heretofore been proposed as vaccins by various investigators.

Large numbers of experiments with young calves, monkeys, rabbits and guinea pigs prove that when a proper dose of the BCG bacilli is introduced into the organism of animals free from all preexisting bacillary infection, that it gives to such animals a manifest resistance to artifically effected virulent infections, surely fatal for the controls. This resistance has been measured and shown perfect for the bovine race for 18 months against the effects of intravenous injection of a dose of virulent bacilli which causes constantly the death of the controls with acute granular disease within the maximum limit of 60 days. This is shown equally perfect in anthropoid apes vaccinated three years before and left in constant contact with tuberculous monkeys, and it is probable that this protection would be prolonged vis-a-vis to natural contagions.

Since 1906, we have established, and this has been confirmed by Romer and other experimentors, that the resistance thus acquired against virulent infections or reinfections is correlative with the symbiotic life of the bacillus vaccin, with certain cellular elements of mesodermic origin. From this symbiotic life results a complex, to a degree autonomic, the bacillised cell, comparable to lichen which is the product of the symbiosis of an algae and a mushroom, a giant cell; which does not necessarily give birth to a tubercular lesion. When this complex is realized and so long as it persists, the organism to which it is parasite reacts in characteristic fashion to new additions of bacilli or of their products of secretion (tuberculin), it no longer tolerates them even in the state of dead microbic bodies and tends to expulse them. This is the "Koch phenomenon," the constant of which was the origin of the discovery of tuberculin.

After a time it comes about, unhappily, that the protecting bacillised cells disappear, either destroyed by the normal processes of macrophagia, or that the bacilli which they harbor have been eliminated by the natural eradicants of microbes (bile, intestin, mammary glands). Then the immunity is extinguished and the virulent bacilli of reinfection, if again introduced into the organism, regain there all their value of pathogenic bacilli.

This immunity, resultant thus from a "bacillary premunition," offers this character in particular, that it can only be produced in subjects free from all preexisting infection, so that, in our countries of old civilization at least, where the bacillary infection is so extensive that 60 per cent of children 10 years old, and more than 40 per cent of the bovine race over 5 years old give positive reactions to tuberculin, the antitubercular vaccination is applicable solely to very young subjects, the newborn, or to young calves during the first days of their existence, before they have had occasion to absorb and enclose in their lymphatic ganglia any tuberculigenous bacilli.

In view of the results, clearly favorable, with young calves in various agricultural stations, and also those made with monkeys, chiefly chimpanzees, in the laboratory created by the Pasteur Institute, in French Guinea, near Kindia; it became evident that one had no longer the right not to attempt the application of the same method for the preservation of young children of tuberculous mothers, particularly when exposed to the family contagion. Hesitation was the less permissible, since 1921 and the first months of 1922, when Drs. Weill-Halle and Turpin, respectively attending physician and interne of the Charity Hospital courageously offered their kind cooperation in admnistering the cultured vaccin prepared at the Pasteur Institute to a number of nurslings at the Maternity Hospital of Drs. Devraigne and Levy-Solal.

The first trial was made in July, 1921, with a newborn, inevitably destined to tubercular infection by its unavoidable cohabitation with a tuberculous grandmother (phtisis); at periods, the 3rd, 5th, and 7th days following its birth, each time, 6 milligrams (240 millions of the BCG bacilli, making a total amount given of which each dose contained the third part) were given by ingestion. No incident followed the administration. This child, although raised in these bacilli infected surroundings, developed normally and is still in perfect health. During the year 1922, two hundred and seventeen (217) nursing children were treated by Drs. Weill-Halle and Turpin, with such three preventive ingestions, each of 1 cubic centimeter of the BCG bacilli to a total of 1,200,000,000 of these bacilli. During the years that have followed, not one has succumbed to tubercular infection, although 17 of them have lived with their tuberculous mothers.

As it appeared evident that this vaccination was at least harmless; since none of the children have shown the least physiological disturbance throughout the two following years; it was determined, from July 1st, 1924, to widen the field of experimentation and to place these doses at the disposition of all colleagues who would desire to use the BCG for the premunition of the largest number of children possible, when born of tuberculous mothers and particularly exposed to this contagion in the family home.

But it was necessary to determine with all possible precision, the protective effect of this premunition of the BCG. and for that we must be able to compare the mortality of tuberculosis at the different ages of life of the *vaccinated* subjects to that of the *non-vaccinated children.*

Actually this comparison is not possible for young children from birth to 1 year old, and for this category of subjects it is here most important, as we know that exactly here is where tuberculosis reaps the most of its victims, among such as are born of tuberculous mothers or brought up in a contaminated home. The numbers indicated by statistics are exceedingly variable. If those of Leon Bernard, Robert Debre and Marcel Lelong are taken, the mortality between birth and one year of age for children of tuberculous mothers from whom their separation was impossible, must be admitted as 80 per cent. Professor H. Forssner, from his clinic at Stockholm gives the number as 70 per cent. We believe that the average is materially less.

In 1925, the Pasteur Institute had made extensive inquiry among the dispensaries of social hygiene and various other antitubercular organizations; from which it discloses that in Paris, the mortality of children born of tuberculous mothers, was in the first year of their life; for the years, 1923 and 1924, at 32.6 per cent and for the rest of France, 24 per cent. It is almost the same in Eng-

land and in Belgium according to the information supplied us by their respective Public Health Services. We can therefore admit 25 per cent as closely approximating the real minimum.

Comparison of this number with that at present supplied by the cards of the children premunised with the BCG, now permits the evaluation of the advantage obtained by this vaccination.

From July 1st, 1924 to June 30th, 1926, two whole years, the number of newborn thus vaccinated, not only at Paris, but throughout France, by the simple ingestion of three doses of 1 c. c. each of a fresh emulsion of BCG as supplied by the Pasteur Institute, and absorbed from the 3rd to the 10th day after the birth of the child, has reached a total of 11,208.

Of these 11,208 already premunized newborn children, 1,885 have been thus from 6 to 24 months, and individually controlled. Each has the Pasteur Institute card on which is written, every six months, all information that our colleagues are kind enough to supply to meet our wishes. We can resume this information as follows: of 1,210 thus premunised, and between the ages of 1 to 2 years, of which 291 were born of tuberculous mothers and who have remained mostly in contact with them, we find 11 deaths presumably of tubercular origin (8 with a diagnosis of meningitis, 3 of tubercular pulmonary ganglia; but on only 3 of these has confirmation of the diagnosis been possibly by autopsy. The mortality from tuberculosis for the newborn of this category has been therefore 0.9 per cent (nine-tenths of 1 per cent).

Of 568 premunized and between the ages of 6 months to 1 year only; of which 106 were born of tuberculous mothers, two have died from disease, presumably tubercular (meningitis). The mortality from tuberculosis of this group up to the present remains at 0.3 per cent (three-tenths of 1 per cent).

If we consider only the first series, we find that the mortality from birth to 1 year, from tuberculosis, of these vaccinated newborn is less than 1 per cent, whereas in those non-vaccinated the minimum is 25 per cent.

It seems then that it must be admitted that the premunition by the BCG is capable of protecting 99 per cent of newborn children that are exposed after birth to maternal or home contagion.

Other extensive experimentation, similar to this undertaken by the Pasteur Institute, is being carried out for the last two years in different countries, and with varied human racial types. For instance in Indo-China, more than 6000 Annamite or Chinese children had already been premunised by January 1st, 1926; they have been regularly followed up at the Infantile Clinic, and thus far NONE has succumbed to tuberculosis.

At Dakar, the Maternity Hospital and the Clinic for nursing children have vaccinated almost 500 little negroes with the constantly similarly favorable results.

In Europe there are several countries where their own laboratories prepare and distribute the vaccine to those physicians who wish to use it. This is the case with Belgium, Italy, Switzerland, Roumania, the Union of the Russian Republics, Greece, Jugoslavia and others.

Up to the present, very few deaths from tuberculosis or diseases presumed to be of that nature, have been noted among children vaccinated at birth. It seems inevitable to have some failures, as recent research of our own laboratories, confirmed by various French and foreign scientists, show the existence, happily rare, but certain, of passage of elements of virulent tubercular bacilli, in so fine a state as to pass through the porous porcelain filter, piercing the barrier of the placenta, without lesion to it, and thus able to severely infect, before birth, the child of a tuberculous mother. These filtrable elements appear endowed with high toxicity and cause the death of the nursling during the first weeks of its life, generally without any visible macroscopic lesion of tubercular nature.

It is evident that in such a case of preexisting infection constituted *in utero*, the premunition after birth becomes inoperable. It seems indeed, that to exceptions of this kind might be attributed the rare failures thus far noted for this antitubercular vaccination.

As yet we are insufficiently documented as to the probable duration of the immunity conferred by this vaccination vis-a-vis to natural contaminations. We only know from very exact experiments, carried out with young calves and monkeys and also from clinical observations of children premunised since 1921 and 1922, that resistance to infection by even close cohabitation with contagious tuberculous subjects seem to persist at least three years and perhaps more.

This is already an appreciable result, since we know that the dangerous period for the contamination of children is exactly this very young age, and that after the first year of life the risks of massive infection, although still to be feared, are much less frequent. Besides, it is apparent from the experimentation with young calves, as well as in the cases of the young children themselves, that *there is no inconvenience in renewing this vaccination two or three times, at one to two year intervals, in subjects thus vaccinated at birth.* Their initial immunity is probably thus reinforced and may be thus definitively so, that they escape such accidental infections to which they might be exposed.

However we cannot pass judgment for a long period yet, on the remote effects of vaccination by the BCG and the sociological determinants that may arise therefrom. Any affirmation or hypothesis would be out of place on this subject. One can and must however take account of the facts established. These already give us two proven postulates:

1. That the premunition by the BCG is harmless for the new-born.

2. That this premunition is an effective preventive of contagion by cohabitation of families throughout the three first years of life.

For the moment we do not hope to accomplish more perfect results, and as it is necessary for society at large, to intensify with all our forces, the struggle against tuberculosis, let us not neglect any other activity, even if of only limited efficiency.

* * *

(Translator's Note:—The BCG vaccination was first made known in the United States, by this translator's address to the Barbour-Randolph-Tucker Medical Society, at Elkins, W. Va., 1924. See the paper of Dr. C. H. Hall, published in The W. Va. Medical Journal, July, 1925. The Journal has frequently since then published notes of its continued successes, and is happy to offer its readers herewith, the first and most recent authentic statement of its status in the World, now; made by its author, Prof. Calmette. Since Jan. 1, 1926, this method is being used by the health department of New York City).

INDICATIONS AND LIMITATIONS OF X-RAY THERAPY IN DISEASES OF THE SKIN

By HOWARD T. PHILLIPS, M. D.
Wheeling, W. Va.

IN THE FIELD OF DERMATOLOGY, as in all other branches of medicine, every once in a while there is a therapeutic agent advanced which works some wonderful cures and the danger in such a case is the tendency to proclaim that particular agent a panacea or cure-all for all skin diseases. Such was the case after the introduction of salvarsan by Erlich, because in skin lesions due to syphilis their disappearance after the first or second weekly injection was almost as magical as the cures of loathsome disease which are recorded in biblical history; however, by practical experience we finally found out that salvarsan accomplishes such results only in specific diseases caused by the spirocheta and today we reserve its injection for such cases.

After X-ray exposures had caused the disappearance of certain skin lesions such as epithelioma or basal cell skin cancer, lesions of chronic eczema and a few others, then it was thought we had a sure cure for all cutaneous lesions and since then it has been tried on every sort of skin conditions from argyria to xanthelasma with some successes and

many failures, for while there are certain skin diseases in which brilliant results can be obtained by the correct use of X-ray there are also many others in which the etiology and the pathology of the diseased condition clearly indicates that the application of X-rays is not only useless, but in many cases actually harmful. An example of the latter class is the attempt to permanently remove hair from the face by X-ray exposures. The dose of X-ray which is heavy enough to kill the hair follicle is also large enough to cause definite harmful effects to the skin such as atrophy, wrinkling, telangectasia and a predisposition to malignancy in the years to come. X-rays should never be used in an attempt to permanently remove hair.

I want to briefly outline the method used in obtaining an exact dose of X-ray. By exact dose I mean the quantity of X-ray which we can speak of as 1 skin unit or any multiple or fraction thereof for there is no such word as "about" in X-ray therapy. The dose is never "about" so much; it is and should be spoken of as exact amount and with the same certainty as we say two and two make four, and not that two and two make "about" four.

The dose of X-ray is best measured by attention to 4 factors:

1st. Spark gap, representng the voltage used.

2nd. Milliamperage, representing the current used.

3rd. Distance of the target or anode from the skin.

4th. Time of exposure.

Most men treating skin diseases use the unfiltered ray unless it be in some exceptionally indurated or deep seated condition. Of course, tubercular adenitis and carcinomatous nodules must have filtered ray, but they can hardly be classified as dermatological conditions. The figures most commonly used in computing unfiltered X-ray dosage are as follows:

6 Inch spark-gap, or back up.

2 Milliamperes of current.

8 Inch distance from the target to the skin; and a

3 Minute exposure gives 1 skin unit.

The skin unit spoken of above is the quantity of X-ray which does not produce an erythema of the skin, but does cause a falling of the hair in from 2 to 3 weeks, and allows its return in from 6 to 12 weeks.

The figures given above can be varied to suit the convenience of the operator bearing in mind the following facts:

Double the time and we double the dose, or halve the time and we halve the dose Double the milliamperage and we double the dose or halve the milliamperage and we halve the dose.

Double the spark-gap (or voltage) and we double the dose while if we halve the spark-gap we halve the dose.

However, if we vary the distance of the anode, or target from the skin then we vary the dose according to the law of light, i. e., it varies inversely as the square of the distance.

From the above stated facts it will be seen that a simple arithmetic formula can be used to standardize the dose of unfiltered X-ray regardless of the factors used but for practical purposes it is better to use one or at most 2 sets of factors by which all dosage is given.

In taking up the skin diseases which are benefitted by X-ray treatment let me make clear that X-ray is not the only method of treatment in these conditions, but it is one of the agents which has been tried and found to be efficient either in curing permanently as it does in many cases, while in others the relief obtained by its use is only temporary as in the lesions of Mycosis Fungoides. There are cases in which X-rays can be used in combination with other therapeutic agents. However, as a general rule it is better not to apply any of the irritating agents to the skin while X-ray is being used, because some drugs apparently enhance the value of the X-rays and cause an erythema and a consequent atrophy and telangectasia where otherwise the dosage given would be perfectly correct. Some of the agents which seem to enhance the effect of X-ray are, Iodine, Mercury, Chrysarobin, Scarlet red, Pyrogallic Acid, Resorcin, Salicylic Acid and other remedies of this type.

The dose of X-ray employed depends upon the pathology of the condition being treated.

Varying from 1-8 of a skin unit in simple inflammatory condition to as much as 2½ or 3 units in malignancy.

A dose of ¼ of a skin unit can be given once a week for several weeks without any damage being done to the skin. In all simple inflammatory conditions an erythema must be avoided if we are to guard against the bad results sometimes seen from the administration of X-ray, while in malignancy, of course, we do not hesitate to give a dose which will cause ulceration and a consequent atrophy and telangectasia for here it is not so much a question of a good cosmetic result as it is the cure of a condition which endangers life and which if not taken care of results in the most deforming of all malignancy making of its victim an outcast from his fellow men on account of the great destruction which usually takes place before death ensues as well as from the odor given off which makes it almost impossible to remain in the same room with a sufferer from this type of cancer.

I have compiled here a list of the common skin diseases in which X-ray is either the best therapeutic agent when properly applied or which at times may be used in conjunction with other methods for alleviation, palliation, or a complete cure.

This list includes Acne Vulgaris, Acne Rosacea, Eczema, Lichen Planus, Seborrhea Dermatitis, Sycosis Vulgaris, Folliculitis, Ringworm and Favus of the Scalp, Localized Hyperhidrosis, Mycosis Fungoides, Psoriasis, Verruca Vulgaris, Verruca Plantaris, Pruritis Ani, Pruritis Vulvae, Senile Keratoses, Epithelioma.

DISCUSSION

Dr. W. M. Sheppe, Wheeling: Dr. Phillips made the point that in many conditions of the milder type X-ray treatment might be replaced by other forms of treatment such as local applications. That is true, but such applications are more or less unclean, and we have to depend upon the patient to make them. X-ray is clean in application, and we can depend upon getting the thing done.

In acne I do not think the outlook is hopeless. We see many excellent results when applied in a vigorous manner.

I think many people are a little too liable to procrastinate with ringworm of the scalp. As Dr. Phillips said, there is only one treatment, and that is epilation, and it should be carried out at once, without delay, and without recourse to local applications, which are worthless.

As to carcinoma, I wish some of you could see the results we have gotten with carcinoma of the eyelids, nose, and lips. With regard to other methods of treatment, radium, of course, is preferred by some. Personally, I think the dosage can be better controlled with X-ray than with radium, and there is therefore less liability of tissue damage. Just one thing—where carcinoma involves the cartilage, such as in the nose and ear, X-ray is of little value, and excision, if possible, should be carried out. These lesions are of long standing, and slow to heal.

Dr. S. D. H. Wise, Parkersburg: I suppose we have forgotten some things, possibly, and have not learned some things. I might be called a fool or a quack, or what not, for the use of arsenic in epithelioma, but after curing some few hundred cases I must mention it. I have had cases come back to me from Baltimore, after having been there for several months for treatment, and after burning the eye out I was able to cure it; however, the eye had to be removed, and after taking everything off the nose but the bone. It has been a thing so long in the discard that I hesitate to get up and say this, but after using the medicine in 500 cases, with failure in no case in which I promised a cure, I feel I must get up and say it. I can use it on the eye and apply it on the cornea without destroying the cornea. You may think I am a quack for using chewing gum, but I apply the arsenic with the chewing gum, let it stay there for a day or two, and get a cure. I suppose you gentlemen will get up and jump all over me for saying I use arsenic, but I believe the intelligent use of arsenic is almost a specific. It is selective in its action, and does not destroy normal tissue to any considerable extent if properly applied. I use it within the eyelid, applying it on chewing gum, because that holds it just where I want it. I have numbers of five-year cures. I say where you can cure nearly every case without destruction of normal tissue around it, you have an agent there which is inexpensive

to the poor man, and I believe if intelligently applied it is almost a specific in epithelioma. It has saved many from a torturing death, and I believe it will save others if intelligently applied.

Dr. Phillips, closing: I have not much to say, except to thank Dr. Sheppe for his favorable criticism.

I think Dr. Wise made too strong a statement when he said that one hundred per cent of skin cancers can be cured by any means, arsenic or any other. There is no doubt that arsenic applied in the hands of a man who is skilful has done a great deal of good; in other cases it has done a great deal of harm. There was a man in Moundsville who destroyed eyes in a great many cases. The patient has to go through absolute hell for six or eight days. Arsenic will do nothing that radium or X-ray will not do. I grant you that many cases have been cured by arsenic paste that can be cured by other means. It can be done by scraping it out with a teaspoon. The use of arsenic paste is rapidly passing, and it is not being used by the younger men, and is not considered as one of the reputable agents. It is one of the things that are in the discard, though it is one of the things that are used by the older men with good result. While we can not condemn it entirely, and while we must believe Dr. Wise when he says he gets excellent results, yet we can cure a great many of the cases by any means which will get rid of all of the malignant material, whether by surgery, X-ray, radium, paste, or what not. The important thing is to get the case early, and do not delay for the application of vaseline, scarlet red, silver nitrate, or what not. These lesions are out in the open, and we can cure them by getting rid of the senile keratotic areas which we know lead to cancer.

THE DIAGNOSIS AND TREATMENT OF LARYNGEAL TUBERCULOSIS *

By EDWARD A. LOOPER, M. D.
Baltimore, Md.

THERE seems to be a general impression that laryngeal tuberculosis is a fatal complication of pulmonary tuberculosis for which little can be done in the way of treatment or cure.

Such an opinion is entirely erroneous for no condition responds more rapidly to properly directed treatment than tuberculous laryngitis if a diagnosis is made reasonably early.

For this reason it is most important that every effort be made to discover a lesion as soon as possible after development. As a matter of fact every patient afflicted with pulmonary tuberculosis should be considered a possible case which is likely to develop laryngeal complications, as records show that approximately one-third of all patients have laryngeal infection and necropsy reports reveal that in more than 50 per cent of fatal cases laryngeal lesions can be demonstrated.

Next to intestinal complications the larynx is most frequently invaded in tuberculosis. The symptoms produced here have a marked influence on the progress of the general disease, for no patient can recover if he has excruciating pain and regurgitation of food through his nose every time he attempts to swallow. Any ulcerating surface in this region is irritable and cough is usually an aggravating symptom which disturbs the patient's sleep and peace of mind so that he cannot get the necessary amount of rest so necessary for the cure of tuberculosis.

When we consider that tuberculosis is our most prevalent disease it is evident that this subject should be of interest to everyone.

* Read in the Eye, Ear, Nose and Throat Section of the West Virginia State Medical Association at Morgantown, May 26, 1926.

Diagnosis

The diagnosis of tuberculous laryngitis is not difficult, although frequently neglected until serious pathological changes have occurred. Too much can not be said about the importance of early diagnosis in these cases, for intrinsic lesions respond readily to treatment and most cases can be effectively cured.

It is a mistake to wait for the usual classical subjective symptoms to develop, such as huskiness of the voice, hoarseness, pain, referred to the ear or throat and dysphagia before examining the larynx. Many cases will show a well developed lesion before subjective symptoms appear. For this reason every patient with pulmonary tuberculosis should be considered a potential case for the development of laryngeal complications. When pulmonary tuberculosis is recognized, it is the duty of the clinican to see that a careful laryngeal examination is made. Even though the throat appears normal on first examination, regular routine laryngoscopies should be made to look for suspicious areas.

Every Sanatorium for the treatment of tuberculosis should have not only a skilled laryngologist on its staff, but all physicians in the institution should be instructed to make a satisfactory laryngeal examination.

If more attention is given to this subject unquestionably the frequency of severe complications can be lessened and many fatal cases prevented.

When examining a throat for early tuberculous involvment most careful investigation of the posterior laryngeal wall should be made, for in most cases this is the most frequent as well as the first area to be infected.

The anatomical construction of the interarytenoid region makes it particularly susceptible to the invasion of tubercle bacilli. Supported by a loose connective tissue framework the mucous membrane is thrown into folds by active movement during phonation, respiration, coughing and deglutition. So that infected sputum which is being continually coughed up passes over this irregular surface and much of it remains in constant contact with the deeper crypts, especially when the patient is lying down.

After a time the irritating and devitalizing action of toxins produce a reaction and erosion of this mucosa. There may be at first only a single hyperaemia or the tissue may be infiltrated, velvety or roughened. As the process advances gradually a hyperplasia occurs, which may be elevated and smooth or nodular with irregular vegetations as tubercles coalesce. When the epithelium breaks down a raw ulcerating surface forms which becomes infected with mixed organisms.

The next structure in order of frequency to be involved are the vocal processes. Then the vocal cords.

The nature of the true cords make them susceptible to attack. Cartilagenous bands covered with a thin layer of epithelial cells, do not withstand the onslaughts of toxins for any great length of time without becoming damaged. Hyperaemia, thickening or fusiform enlargement of one or both cords may be first noticed. Later when ulceration occurs there is irregularity which may assume the typical mouse bitten appearance, or progress until there is much destruction of tissue and deformity which can never be repaired.

The ventricular bands are not involved as frequently as the cords, but a lesion here may be very extensive and tuberculoma in this region is not uncommon.

As long as tuberculosis is confined to the interarytenoid space, vocal processes, cords or ventricular bands the lesion may be considered intrinsic as has been suggested by St. Clair Thompson. (1) The prognosis here is much better than in affections of the arytenoids, epiglottis, or pharynx.

Early involvment of the arytenoids may appear as a hyperaemia of pseudo-edema on one or both sides. In advancng stages when ulceration develops there is interference with swallowing and dysphagia is associated with the taking of food. Nodular swellings, edema of turban shaped character and ulcerated areas are frequently seen on the epiglottis late in the disease. Involvment here is a distressing complication as there is so much pain when taking food.

Pharyngeal tuberculosis is fortunately comparatively rare, as it is a grave condi-

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

tion, for which very little can be done.

An idea of the frequency of various affected areas may be obtained from a study of Lockhart's compilation of 3,994 cases. The posterior wall was involved in 1081. Vocal cords 997. Arytenoid cartilages 940. Ventricular bands 435. Epiglottis 436. Subglottic space 55.

It is the object of this paper to emphasize the importance of making a diagnosis by objective examination in an effort to recognize early lesions before they have advanced to the state where subjective symptoms are produced. However, certain complaints of the patient are often helpful in a final diagnosis.

Dryness and burning of the throat should be regarded with suspicion in tuberculous patients as this frequently occurs two or three weeks before a definite lesion can be made out.

Pain referred to the ear and in the region of the throat usually indicates some laryngeal infiltration and such cases should be carefully watched. The location of the lesion has much to do with the symptoms produced, for a well advanced infection in the interarytenoid space or ventricle, may give little or no disturbance while a small degree of cord infiltration will produce huskiness of the voice and later hoarseness or aphonia.

Infiltration and ulceration around the arytenoids and epiglottis interfere with swallowing and dysphagia is usually associated. Cough is present in most cases and becomes greatly aggravated when raw surfaces are exposed to the continual irritation of mucus and sputum.

As laryngeal involvement is practically always secondary to a pulmonary condition, we usually have associated the general symptoms of tuberculosis, such as loss of weight, night sweats, cough, digestive disturbances, characteristic temperature, etc.

Treatment

The treatment of laryngeal tuberculosis may be considered under three divisions: viz: (1) Vocal rest. (2) The local lesion. (3) General treatment.

Vocal Rest

In all cases where tuberculous invasion of the larynx has been discovered, absolute rest of the voice should be instituted. It does little good to simply tell a patient not to talk, but he should be instructed to write everything. This impresses him with the seriousness of his condition and is also very important as a curative measure. Unquestionably many cases have been cured by silence alone as has been frequently pointed out, so that whatever other form of treatment may be supplemented, vocal rest should be carried out religiously.

Local Lesion

For active treatment of the local lesion, we have found the judicious use of the electric cautery most benefical and now employ it in preference to all other methods of treatment. Our results have been most gratifying and it is surprising that this form of treatment which has been used by a limited number for such a long time is not more generally employed by all laryngologists.

The technique of cauterization is simple, results are sure and complications are negligible. Cauterization can be easily carried out in an office or at the bedside without inconvenience to the patient. Local anesthesia is employed and the indirect method is advisable; however, the direct method may be used when desired.

Experiments conducted by Wood in 1910, clearly demonstrated that cauterization produced an inflammatory reaction of the tissue with the development of new blood vessels, congestion and fibroblasts in the avascular tubercle, giving it necessary nutrition and resistance.

Following his principles and plan of treatment we have found the use of the cautery most satisfactory, as early lesions clear up after two or three treatments and advanced cases will show marked improvement after a few cauterizations.

Even in severe and hopeless cases the cautery is of great value as a palliative measure to relieve pain and coughing.

Only in exceptional cases do we find it

necessary to inject the superior laryngeal nerve and the use of cocaine to allay pain is seldom required, since using the cauterization treatment.

General Treatment

Whenever possible these patients should be treated in a Sanatorium, as a carefully regulated plan of general treatment of the pulmonary lesion is most necessary. It is unwise to have patients with active tuberculosis travel long distances to physician's offices and wait in hot, crowded rooms for treatment. Under such conditions coughing is increased and the strain of travel lowers the patient's general resistance. All of these unfavorable features are eliminated in Sanatorium treatment, and the cases can be carefully followed by both the clinician and laryngologist, between whom there should be the closest cooperation.

At our State Sanatorium under the direction of Dr. Victor Cullen, all cases on entrance are given a thorough physical examination, complete history, pulse and temperature record, also X-ray of chest. If the temperature is over 99.4, patient is put to bed and kept on vocal rest for a while. As soon as the resistance is built up somewhat and the temperature begins to come down, cauterizations are started and are continued at monthly intervals until cured.

Summary

(1) Every patient with pulmonary tuberculosis should be considered a possible case for the development of laryngeal complications.

(2) Regular, routine laryngeal examinations should be made in all cases, as it is most important to make a diagnosis early.

(3) The diagnosis should be made by objective examination, as it is a mistake to wait for subjective symptoms to develop before giving attention to the larynx.

(4) If a diagnosis is made early the case can be easily cured. If delayed the prognosis is serious.

(5) Treatment of the local lesion with the electric cautery has given us excellent results. We now use it in preference to all other methods of treatment.

(6) The prognosis of laryngeal tuberculosis is encouraging and cures are to be expected if recognized early and active cauterization is employed.

REFERENCES

1. Thompson, St. Clair—Tuberculosis of the Larynx Medical Research Council. Report No. 83. His Majesty's Stationery Office, London.

2. Lockhard, Lorenzo B.—Tuberculosis of the Nose and Throat. C. V. Mosby Co.

3. Wood, George B.—The Use of the Electric Cautery in Laryngeal Tuberculosis. American Journal Medical Sciences. June, 1922, No. 6, Vol. XIII. Page 854.

DISCUSSION

Dr. King: I just want to thank Dr. Looper for his paper. I believe it is the best presentation of the subject I have ever heard. It is a principle we apply in other things and certainly will be of great service where we all see cases of Laryngitis, but which we are unable to differentiate from the chronic cases.

Dr. Looper: The involvement of both cords is one of the greatest problems we have. Those cases we always put on silence as a safeguard, and make special examination of the upper respiratory tract, and watch those cases very, very carefully; however, where you have one cord involved, that is a different matter, but with any case of laryngeal tuberculosis you should make regular examinations and the laryngeal mirror should be used once a month.

Q. How deep do you go into the arytenoid?

A. I try to go through the superficial layer, the mucosa. In other words, I touch it and touch it lightly. I don't do too much at one time; probably three or four punctures, very lightly and have the patient return; do this at monthly intervals, and they have very little reaction. Here's the proposition: You have everything to gain and nothing to lose, and if you get them early you are going to get them well, if they have any fight left.

THE WEST VIRGINIA MEDICAL JOURNAL

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS

J. HOWARD ANDERSON, Marytown — WALTER E. VEST, Huntington — CHARLES W. WADDELL, Fairmont — HARRY M. HALL, Wheeling

THE JOURNAL issued on the first of each month. Entered as second-class matter, January 1, 1926. Acceptants for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Authorized July 24, 1919.

Subscription to Members	$2.00 Per Year
Subscription to Non-Members	$3.50 Per Year
Single Copies	35 Cents

OFFICERS

President:
J. R. BLOSS ... Huntington
President-elect:
CHESTER R. OGDEN ... Clarksburg
First Vice-President:
R. O. ROGERS ... Bluefield
Second Vice-President:
H. C. SKAGGS ... Montgomery
Third Vice-President:
D. A. MACGREGOR ... Wheeling
Treasurer:
HUGH G. NICHOLSON ... Charleston
Executive Secretary:
MR. STERRETT O. NEALE ... Charleston
Delegate to A. M. A., 1926:
J. R. BLOSS ... Huntington
C. R. OGDEN, *Alternate* ... Clarksburg
Delegate to A. M. A., 1926-27:
H. P. LINSZ ... Wheeling
R. A. ASHWORTH, *Alternate* ... Moundsville

COUNCILORS

First District:
H. P. LINSZ, (1-year term) ... Wheeling
C. G. MORGAN, (2-year term) ... Moundsville
Second District:
C. H. MAXWELL, (1-year term) ... Morgantown
C. H. HALL, (2-year term), ... Elkins
Third District:
JOHN FOLK, (1-year term) ... Bridgeport
C. R. OGDEN, (2-year term) ... Clarksburg
Fourth District:
J. E. RADER, (1-year term) ... Huntington
W. E. VEST, (2-year term) ... Huntington
Fifth District:
J. H. ANDERSON, (1-year term) ... Marytown
H. G. STEELE, (2-year term) ... Bluefield
Sixth District:
R. H. DUNN, (1-year term) ... South Charleston
C. A. RAY, (2-year term) ... Charleston

¶ All original articles for THE JOURNAL must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

¶ Our readers are requested to send marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

¶ It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

¶ Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

¶ Advertising forms will go to press not later than the tenth of each month. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

¶ Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, 303 Professional Building, Charleston, W. Va.

STANDING COMMITTEES

Medical Defense Committee

H. P. Linsz, Wheeling; C. R. Ogden, Clarksburg; C. G. Morgan, Moundsville.

Committee on Scientific Work

G. H. Barksdale, Charleston; O. D. Barker, Parkersburg; D. A. MacGregor, Wheeling, Scientific Secretary.

Public Policy and Legislative Committee

C. A. Ray, Charleston; G. A. MacQueen, Charleston, R. H. Walker, Charleston; James McClung, Richwood; J. R. Bloss, Huntington; D. A. MacGregor, Wheeling.

Committee on Hospitals

Robert J. Reed, Wheeling; B. H. Swint, Charleston; R. J. Wilkinson, Huntington.

Committee on Professional Relations

J. R. Shultz, Charleston, chairman, (3-year term); H. G. Nicholson, Charleston, (1-year term); H. R. Johnson, Fairmont, (2-year term); A. G. Rutherford, Welch, (4-year term); W. R. Goff, Parkersburg, (5-year term).

Surgical Section

E. Bennette Henson, Charleston, chairman; W. R. Goff, Parkersburg, secretary.

Eye, Ear, Nose and Throat Section

T. W. Moore, Huntington, chairman; R. A. Tomassene, Wheeling, secretary.

Woman's Auxiliary Officers

President, Mrs. A. G. Rutherford, Welch; *First Vice President*, Mrs. W. H. St. Clair, Bluefield; *Second Vice President*, Mrs. J. P. Lilly, Morgantown; *Secretary*, Mrs. C. M. Scott, Bluefield; *Treasurer*, Mrs. C. A. Ray, Charleston.

EDITORIAL

SHOCK-(ING) METHODS OF TRANSPORTING THE WOUNDED

> "....., ...
> driver was first to reach Whitesville with an ambulance, and the first to leave. He left Charleston at eleven forty and reached Whitesville at one twenty-five, where he placed five injured in the ambulance and arrived at the.....hospital here at three thirty this morning. One patient was placed on the cot, two sat up inside the ambulance and TWO WERE SLUNG ON STRETCHERS FROM THE ROOF."

The above news item appeared in *The Charleston Daily Mail* of Sunday, July 25th, 1926, in reporting the catastrophe at Whitesville, West Virginia, fifty miles from Charleston in which six persons were killed and about 40 injured when a bridge collapsed at that place.

The following article was written and ready for the press before the above catastrophe occurred. Attention is called to the last part of the news item which was printed by *The Daily Mail* as the reporter received it: "Two were slung on stretchers from the roof."

(And hauled 50 miles over mountain roads).

The modern mode of conveyance for the recently injured is in a vast majority of instances the first automobile procurable. The driver is instructed to "step on the gas" and get to the nearest hospital as quickly as possible. Result: The hospitals of the country are daily receiving patients with comparatively minor wounds in a state of shock which was unheard of ten years ago. The writer has seen many cases die in shock which in his estimation would have lived had they not been rushed to the hospital by automobile. The wounded would stand a better chance if left by the roadside or carried to the nearest house, given plenty of hot coffee and allowed to lie under warm clothing until medical aid could be brought to the patient rather than placed in any sort of conveyance and regardless of consequences rushed to the hospital.

The present day ambulance driver's sole ambition is to make as much noise and speed as possible when entrusted with a human soul whose very existence depends upon careful driving. Upon one occasion the writer saw an ambulance driver become so excited to get going that the ambulance was jerked from under the patient's cot and the cot allowed to fall to the ground. Another instance is recalled where the doctor riding with the patient had to get another man to crawl through the window to the driver's seat and turn off the engine to keep the driver from killing the patient.

We are living in the automobile age and many changes are taking place. A few years ago a doctor was rushed to the scene of an accident to administer to the wounded but today the wounded are being rushed to the doctor or hospital. The question arises: Is this change better or worse for the patient? Those familiar with the causes of shock will agree that haste makes waste and that more people are killed by being rushed to the hospital than are thus saved.

A good thing for anyone to know when called upon suddenly to render first aid is what the doctor would do under such circumstances.

The doctor would render first aid to the more seriously injured first—the one making the least fuss. If there was bleeding he would stop it with direct pressure or by the use of a tourniquet. If there was a broken arm or leg he would pull gently but firmly upon it until it was straight and apply some sort of splint to keep it straight and if possible he would keep it stretched. Pulling gives relief to a broken leg or arm.

The doctor would place the seriously wounded on some makeshift of cot with head lower than the body, and the body would be covered with lots of cover to keep it warm. Some sort of hot drink would be given if able to swallow, and if a house was nearby a search would be made for emergency drugs, such as aromatic spirits ammonia, whiskey, or hot coffee, or just plain hot water.

The doctor would not allow his patient to be moved except in the easiest possible manner.

The doctor would keep his patient in the nearest farmhouse or by the roadside for hours rather than have the patient thrown into an automobile and rushed madly to a hospital many miles away.

The doctor knows that there is only one way to treat shock and that is rest, heat and freedom from pain, and the farmhouse is about as good as the finest hospital in the world for such treatment.

When in doubt leave the injured by the roadside under the care of someone and get the doctor to the patient rather than patient to the doctor.

Let the doctor direct the transportation of the wounded and there will be no reckless driving of ambulances through the streets and on the highways.

—E. BENNETTE HENSON.

———o———

A MATTER OF POLICY

Possibly there has been some criticism of *The Journal* because of its attitude in the recent primary campaign toward some of the candidates for the nomination of high office. Therefore, as a matter of policy it should be understood NOW that we are not in politics insofar as political parties are concerned. We will not, however, hesitate to publish the record of any official or candidate who has or will advocate any measure detrimental to the science of medicine or the public health.

Public records are public property and we have no apologies to offer to any individual whose public record has favored any of the medical quacks. If we have been in the least bit instrumental in the defeat of any aspirant in either party whose public record is unfavorable to the science of medicine, we feel we are partially recompensed for the public humiliation experienced by a number of members of the profession a few months ago.

The association, through its committee on public policy and legislation has inaugurated a scheme of education in public health matters. The average legislator is not expected to be conversant with public health questions and requirements. Therefore, if all of our members, regardless of party affiliations, would discuss public health matters with prospective legislators back home, these legislators would be acquainted with the problems when they did reach them for consideration.

There is much educational work to be done, not so much in Charleston as in the home towns of the candidates. With the wholesouled cooperation of our membership this committee can accomplish much good. Let us repeat that it is not a matter of partisan politics—it is a matter of public policy with the health of the public at stake. If we are successful in defeating our enemies—those who would enter the side door in the practice of the art of healing—all hands must work. —C. A. R.

———o———

HOSPITAL PROBLEMS

North, South, East and West, the nation over, hospital owners and the medical profession are being confronted with the problem of making financial ends meet without raising the cost to those in need of hospital and medical services. There is the ever-present possibility that the cost will reach such a prohibitory height that the public will demand state intervention and when that demand does become general it is logical at this time to predict (in the light of past events) that the state may take steps to confiscate hospitals or engage in the operation of a general hospital service in competition with the private institutions.

Southern Medicine and Surgery is alarmed by the ever-increasing cost of hospitalization and nursing service. This journal, published at Charlotte, N. C., among other things believes that nurses are making too great demands. In a recent editorial on "The Cost of Hospitalization," this journal says:

> "So great has been the increase in the cost of hospitalization that only a small percentage of our citizens can afford this luxury. It is true that a considerable percentage is hospitalized in pay beds, and most of these bills are eventually paid; but that does not mean that it can be afforded.
>
> "Hospitalization and trained nursing so

constantly enter into the same case that they will be considered together. It's a far cry from 1895, when, according to Dr. Geo. W. Pressley, private room, board and nursing in St. Peter's Hospital, Charlotte, cost from to 3 to 5 dollars per week, to this present day of grace, when the cost has mounted to 4 to 8 dollars per day for room, with nursing at a cost ranging from 5 to 20 dollars per day additional. These are estimates of local charges and are quite conservative. In one large New York hospital rooms are 5 to 15 dollars per day and one graduate nurse's service costs 12 dollars per day. Still a private hospital which can show a profit from its operation is a rarity indeed.

"Since it has come to pass that so many persons live in hotels, apartment houses and clubs, a large proportion of the population have no home facilities for care during illness and must go to hospitals. Perhaps a larger factor in the increased utilization of hospital beds is an unreasonable idea that being enclosed by bricks, built into hospital walls will of itself, conduce to recovery. In many, if not most homes, the household arrangements are such that any ordinary case of illness may be seen after entirely adequately; moreover in many of these a graduate nurse does not fit in, and a neighborhood nurse, or one of the family, can minister to the needs of the patient far more effectually as well as more economically.

"Some years ago it was a general custom except in instances of tiding over an emergency for a nurse to be on what was called 'twenty-four hour duty.' Of course she was not actually on duty constantly; she had two or three hours for a walk; she could generally sleep undisturbed through six or eight hours of the night, and as the patient improved her duties became very light indeed. Now, we understand this practice has wholly passed; presumably it was found difficult to distinguish between 'twenty-four hour duty' and twenty-four hours of work. Certainly, at the worst, her duties were light as compared with those of the wife and mother in the average home during even a trivial illness.

"Then, if patients be encouraged in the idea that they must be in hospitals and have graduate nurses in every case of illness, and these patients cannot pay for such accommodatons, what is the next step? Some say hospitalization at the expense of the State!; and when the majority who cannot pay insist on going into a hospital and being nursed through every illness, with the State paying the bills, is anything more reasonable than to assume that there would follow the demand that a medical attendant, also paid by the State, be provided to supplant the private physician?

"Undoubtedly many a patient's chance of recovery is materially lessened by worrying over the fact that his illness is costing him more each day than he can possibly make in a week when he is well and active; what is more natural than that he should seek escape from this expense and worry by voting for the establishment and maintenance of a system of treatment for the sick at the public cost?

"This is no attack on hospitals or nurses. It is written as much in the interest of private hospitals and private nurses as of private doctors; for all of us are dependent on the fees paid by private patients. If they are taught that they must have, in every illness, the expensive accessories for cure which are needed only in exceptional instances, they will demand that the State supply them, since they cannot pay for these 'necessities' themselves. Then would soon be brought to pass a condition in medical care analagous to that existing in education today, the overwhelming majority of hospitals being publicly owned and staffed by doctors on salaries, with a few privately owned hospitals and a few doctors in private practice for those whose attitude toward this public care for the sick would be the same that a few manifest toward the public school system today.

"Hospitalization and graduate nursing are necessities at times, and then they are among the greatest boons of mankind. When they are indiscriminately ordered in order that the doctor may assemble his patients for his own convenience, that he may get the reputation among the nurses of 'keeping the hospitals full of patients,' or for any other reason than reasonably meeting the needs of the patient's case, they are grevious burdens imposed on already overladen shoulders.

"One of the most pressing needs of our time is that of reducing the cost of illness. We should apply ourselves to it diligently and rationally; discarding all such generalities as 'getting the best for a patient' (which seldom means anything except most expensive) never advising a patient to enter a hospital for treatment or to employ a trained nurse unless we ourselves would do the same under the same circumstances; and in the interest of those who must have such care, obtaining information from every available source on economical hospital operation; and, finally, conferring with local bodies of graduate nurses as to means of

meeting the nursing needs of the great majority of all patients—those unable to pay present charges.

"Unless something effective is done along this line, many thoughtful persons conversant with the situation believe that a generation or two hence as large a proportion of the total of sick persons in the country will be in State-owned hospitals, attended by doctors on salary from the State, as is the proportion of children of school age who are enrolled in our public schools. In other words State Medicine will have arrived."

The foregoing undoubtedly conjures up a drab picture in one's imagination. But the situation in North Carolina is no different from that in Boston or in West Virginia. *The Boston Medical and Surgical Journal* wonders how far the free medical service "process can extend before it cracks?" As a remedy it suggests that hospitals charge a moderate fee to all who can pay and then in turn reimburse their staffs. It also warns that the profession keep a "weather eye on the horizon" in the following editorial:

"In a recent issue of this Journal, comment was made upon the cost of private medical practice as investigated in the County of Kings, New York. In the joint report of the medical society of this county and the Committee on Dispensary Development of the United Hospital Fund of New York, it is stated that 'it seems safe to say that a family of five in this city requires an income of $2,200 to $3,000 according to their standard of living, for the necessaries of life, without allowance for the care of health beyond a small outlay for minor illnesses.' According to the statistics of the New York State Housing Commission, two-thirds of the families of New York City have incomes under $2,500. The estimated ability of a family of four or five members with an annual income of $2,500 to pay for the care of health, including doctor, dentist, nursing, medicine and so forth, would not be over $100 in a year. That so large a proportion of the community can afford to spend so little for medical care is a fact deserving serious consideration.

"Physicians as a class are not economists; they are highly developed individualists, examining one case at a time. The larger aspects of medical practice they too often ignore. It is well for the medical profession to look occasionally from the actual management of sick people, and to consider the relation of their profession to the community as a whole. Such a survey is suggested by the report referred; the doctors of every large city may well ask themselves what will be the ultimate result of a situation in which two-thirds of the population can afford to pay only for minor illnesses.

"It is true that the aggregate sum of many small fees may run into larger figures. If the nine families in which there was no illness would contribute to the medical care of the tenth family in which sickness existed, or if each family would save a fair sum every year to pay for medical services when sickness came, the solution would be easy. But to expect that is to be disappointed, for it is only human nature, encouraged by present day standards of living, for most families to spend to the limit while they have the money, and to enjoy every possible luxury while they have their health.

"Whenever serious illness overtakes them, they must look to charity, either through the medium of a hospital, or through the kindness of a physician more skilful than the one they usually employ. In either case, this aid is made possible by the contributions of that third of the population which is more well-to-do. The hospital is supported by the taxes or contributions of wealthy individuals; the surgeon or specialist whose aid they solicit is supported by the fees of these same people.

"The situation is not so very different from that which obtains in other lines, such as education, fire and police protection and government. The economist may say that the fortunes of the rich are based upon profits made by selling goods to the poor, or by exploitation of the laboring class. If this is so, and no doubt to some extent it is true, the people to whom we say we give charity are really in a roundabout way contributing to our support. Be that as it may, the percentage of families who cannot afford to pay directly for their medical care is increasing. Every dollar that can be spared from the purchase of necessities is spent for radios, automobiles and other luxuries. If sickness comes, the doors of the great hospitals swing easily; their staffs are composed of the best internists, and famous surgeons. The more time these same doctors spend at the hospital, the higher have to be the fees which they charge for extramural work. How far can this process extend before it cracks?

"The most likely remedy, as we can see it, consists in hospitals charging moderate fees to all who can pay, and from these fees reimbursing the staff. This departure has already been made in some institutions, and their example, we predict, will be followed

by more. Since in hospital practice a physician's time is conserved so that he can see many more patients than he can see privately, he can afford to treat hospital patients at less per man than he can treat private patients. Patients will have the benefit of the best advice without asking for charity, yet without having to pay impossible fees.

"We should not be surprised to see some enterprising hospital inaugurate a sort of insurance scheme, whereby a family, by payment of a certain sum annually, could be assured of care for its members in case of illness.

"Change in the science of economics may come more slowly than the revolutionary changes of physics and chemistry, but they will take place whenever a system becomes inadequate. It may still be many years before the cost of private medical care becomes too great for the great majority of the population to meet but when that time comes, other ways of providing medical services will have to be forthcoming. It is well for our profession to keep a weather eye on the horizon, and not to be caught entirely unawares when the storm bursts."

The two foregoing editorials are full of thought for private hospital owners as well as the medical profession of West Virginia. Existing conditions of today are unquestionably leading to State Medicine.

Many hospitals manage to exist because of the mere pittance subscribed by industrial workers in order that their sick and injured may be cared for. The hospitals may break even but the doctor gets nothing. In many instances those who can pay will not pay—and at the same time they make their visits daily in high priced automobiles.

The itinerant "dead beat" often uses hospitals to save hotel expense and pays with a promise. The service to him heaps up the load of "overhead" and makes the cost of hospitalization higher to those who want to pay.

We think it is high time for the hospital association of West Virginia to reorganize and give these problems the undivided attention that they deserve.

TUBERCULOSIS PREMUNIZATION

We are publishing in this issue Dr. Magill's translation of Calmette's recent lecture on anti-tuberculosis vaccination. This work by Calmette probably means a distinct step forward in the prevention of the great white plague. The efficacy of parallel work in the field of bovine tuberculosis has been apparently definitely demonstrated and the statistics given by Professor Calmette would seem to place the work in the human animal on a firm footing.

Calmette, who is certainly the world's greatest authority on the biochemistry of tuberculosis, and, for that matter, probably on all phases of the disease, has been able to reduce the tuberculosis infant mortality rate for the first year of life in baby contacts to less than 1 per cent, whereas the rate for control statistics of unvaccinated babies exposed to the infection is approximately 25 per cent. He grows the culture of tubercle bacilli in pure ox bile, to which 5 per cent of glycerine has been added and believes that this medium renders the microbes essentially avirulent by saponification of the waxy-fat cell wall of the organism. These cultures have been carried through several hundred successive generations in order to reach the attenuation stage necessary for use. The vaccination, which Calmette denominates "premunization," can be used only in subjects who have not been previously infected with tubercle bacilli, hence is applicable only to the new-born. The vaccine is given by mouth and the procedure is apparently very simple. If further observations and experimentation confirm Calmette's conclusions and the vaccine can be marketed by the various biological supply houses, within one generation tuberculosis could be made almost as much of a curiosity as yellow fever is today.

—W.E.V.

THE LAENNEC CENTENARY

Rene Theophile Hyacinthe Laennec was born February 17, 1781, and died of pulmonary tuberculosis August 13, 1826. Thus may be recorded the life cycle of an individual. The history of Laennec, however, invites more detailed record because of the great accomplishments of the man and physician, in spite of many handicaps which conspired to prevent his notable achievements.

His mother died when he was only six

years old, which resulted in a breaking up of the family circle. This loss, however, was not without compensation, as the boy was sent to his father's brother, Guillaume Laennec, a physician of culture and of high standing in medicine. The boy grew up under the terrible experiences of the French Revolution, and lived almost in the heart of the turmoil. At 13 he wore a sword, and by the orders of Robespierre took part in the Fete de l'Etre Supreme.

The boy was temperamental and craved encouragement, which was lavished upon him by example and precept by his good uncle. On the other hand, his father was vain, negligent, prevaricating, and unstable. On many occasions the father endeavored to separate the boy from his uncle, but fortunately for the future of medicine, he was unsuccessful.

Laennec entered as a student at the School of Medicine at the Hotel Dieu at Nantes in September, 1795, being then 14½ years old. He diligently attended dissections and anatomical lectures given by Bacqua. It indicates the war-like character of the times to find that in the same month he was appointed military surgeon of the third class, in which capacity he was probably attached to the Hospital La Paix with his uncle. The staff of this institution was cut down in 1797, and both went to La Fraternite, where Ulliac became young Laennec's teacher. He was industrious, but found time for music, dancing, and rambles into the country. Sometimes his devotion to these amusements, especially music, which he loved best, was so prolonged that his affectionate uncle became worried, but Theophile never caused him any real anxiety. He learned to play the flute very well, studied Greek, he made collections of all sorts of natural objects, and worked at botany in the apothecary's garden.

Laennec matriculated at the Ecole de Medecine on May 2, 1801, and from that time he actively labored in his life work. Under the teaching of Corvisart, who looked upon morbid anatomy as the foundation for the classification of disease, the young man showed marked adaptability and accomplished much in anatomical studies and original observations, and only two years later he began to go to lectures on morbid anatomy.

His genius began to unfold; he exulted in his profession. What he did during the remaining twenty-five years of his life would, under any circumstances, arouse our wonder, but his accomplishment appears marvelous when we remember that two millstones hung round his neck, either weighty enough to have dragged down most men. The first was his wretched health; he suffered from asthma, angina, insomnia, neurasthenia, and later from psthisis. More than once he nearly gave up his career in Paris for a life in the country. The second was his niggard of a father, who, although he failed to send money for clothes, books, and examination fees, nevertheless fawned upon his son to use his influence with those whose attention he had attracted to get him all sorts of posts.

Laennec was an expert in shorthand and was a great note-taker. During his first three years at La Charite he drew up a minute history of nearly four hundred patients. His first publication in 1802, at the age of twenty-one, was the description of a case of mitral stenosis which appeared in the *Journal de Medicine, de Chirurgie, et de Pharmacie*, June-July, 1802, and two months later his classic on "Histoires d'Inflammation du Peritoine" attracted wide attention. Thereafter his writings followed in quick succession, covering many points on normal and pathologic anatomy; later, on clinical medicine; and finally, on physical signs determined at the bedside and confirmed at autopsy. It is likely that the number of autopsies he performed would run well into the thousands, most of them upon patients whom he had previously studied at the bedside.

He was indefatigable in his labors, but on many occasions had to take holidays and at times prolonged rests in order to recuperate.

He was always keen on correlating signs and symptoms together with treatment, and in his own case made some valuable observations upon the effect of outdoor life at the seashore in promoting his well-being.

His thesis for graduation was "Propositions sur la Doctrine d'Hippocrate Relativement a la Medicine Pratique." He was graduated June 15, 1804, at the age of twenty-three.

A description of his physical appearance is

as follows: This small attenuated bony figure of a man, with prominent cheek bones, hollow cheeks, thin nose and lips, calm, reflective blue-grey eyes, a long head covered with carelessly combed abundant chestnut hair, who was not handsome, but not ugly, whose face showed much distinction and intelligence, having gained his degree, was now cast upon the world to earn his livelihood and to illuminate it with genius not often excelled in our profession.

In his first year of private practice he earned 150 francs; in the second, 400. After that it increased rapidly, so that in 1813 it reached 10,000 francs. He had become the fashionable physician, and numerous well-known people consulted him.

At twenty-five he had become a chief among morbid anatomists, and had laid the foundation for scientific medicine by a proper classification of clinical morbid anatomy and by correlating the symptoms personally during life with the appearances seen after death.

On February 28, 1818, he publicly read an account of his new method of investigating the respiratory and cardiac signs by means of the instrument which he called a "stethoscope" but often spoke of it as "cylindre" or "baton."

Clinical reports, autopsy findings, case histories, lectures, and finally the publication of his book recording the wonderful results accomplished by the careful observation of physical signs as recorded in the first edition of *De l'Auscutation Mediate*, indicate the intensity of application, keenness of discernment, and correct interpretations that characterized all of his work.

It has indeed been inspiring to review some of the histories and records of the life of this wonderful man whose centenary should receive more than passing commemoration. Laennec was in his day what Osler was to the recent generations. A perusal of Laennec's writings is recommended to all medical students.—*The Atlantic Medical Journal*, August, 1926.

REPORTS FROM COMPONENT SOCIETIES

Fayette

One of the best meetings in history of the Fayette County Medical society was held August 10 in the new Oak Hill hospital, with more than 80 representative members of the profession in Southern West Virginia in attendance. The Fayette society and guests were entertained by Doctors J. H. McCullough and A. U. Tieche, owners of the hospital, at dinner. This was followed by an interesting scientific program, which included:

"Brain Tumors," by C. C. Coleman of Richmond, Va.; "Pericarditis With Effusion," by Walter E. Vest, of Huntington; and "Ureteral Obstruction," by R. M. Bobbitt, of Huntington. The first and last papers were illustrated by lantern slides. Among those who participated in the discussion were Doctors John E. Cannady, of Charleston; A. H. Grigg, of Beckley; R. J. Wilkinson, of Huntington; W. S. Robertson, of Charleston; C. A. Ray, of Charleston.

While the social session was in progress, visitors were taken on a tour of inspection of the new hospital plant and all were highly interested in the latest and most up-to-date equipment that has been installed. Among those who registered at the meeting were:

C. A. Ray, Charleston; Wirt B. Wilson, Charleston; M. A. Moore, Kingston; B. B. Richmond, Skelton; F. F. Garrett, Sprague; W. W. Koiner, Beckley; E. S. Dupuy, Beckley; K. M. Jarrell, Beckley; E. E. Walker, Scarbro; D. L. Hill, Wickham; W. A. Thornhill, Charleston; Ross P. Daniel, Pemberton; M. S. Doak, Price Hill; J. O. Bailiff, Mullens; O. P. Edds, Fayetteville; F. J. Moore, Affinity; W. P. Black, Charleston; G. W. Johnson, McAlpin; G. M. Skaggs,

Page; B. W. Eakin, Tams; W. H. Simmons, Slab Fork; R. J. Wilkinson, Huntington; A. R. MacKenzie, Huntington; W. A. Simpson, Baltimore, Md.; Robert K. Buford, Charleston; J. H. Hansford, Pratt; C. W. Henson, Minden; A. E. Bays, Boomer; C. M. Hawes, Huntington; R. M. Bobbitt, Huntington; A. H. Grigg, Beckley; Walter E. Vest, Huntington; T. E. Romine, Charleston; Ben F. Brugh, Montgomery; Claude Frazier, Powellton; H. C. Skaggs, Montgomery; E. E. Jones, Mt. Hope; R. A. Ireland, Charleston; R. H. Walker, Charleston; J. F. VanPelt, Oak Hill; J. R. Shultz, Charleston; W. E. Smith, Minden; Fred Stansbury, Beckley; B. Puckett, Oak Hill; J. E. McKenzie, Beckley; J. S. Mosrie, Glen White; J. A. Walker, Helen; W. C. Covey, Winding Gulf; W. E. Bruce, Beards Fork; S. W. Price, Scarbro; J. U. Rohr, Charleston; E. J. Grose, Fayetteville; C. C. Coleman, Richmond, Va.; M. V. Godbey, McKendree; W. B. Davis, Mullens; C. C. Jackson, McKendree; A. C. Lambert, Charleston; Mr. Sterrett O. Neale, of Charleston; and Mr. Charles C. Warner, of Charleston.

Kanawha

The Kanawha Medical society, embracing the counties of Kanawha, Boone and Clay, will resume its regular semi-monthly meetings September 7, and members of the profession in Southern West Virginia have been invited by the officers to attend and hear Doctor E. P. Sloan, of Bloomington, Ill., who will discuss the "Surgical Aspects of Goitre." The meeting will be held in Hotel Kanawha assembly room at 8:30 p. m. Dr. Sloan, a noted goitre specialist, will illustrate his lecture with motion pictures showing the surgical technique and also he will conduct a dry, diagnostic clinic. His lecture will deal particularly with borderline thyroid cases such as incipient tuberculosis and neuro-circulatory asthenia.

Marion

The Marion County Medical society is trying something for the good of its soul—papers are being prepared and read by its own members.

At the regular July meeting papers were read by Doctors C. L. Parks and C. J. Carter. The former lectured on "Hypertension," outlining the various types and causes in his first paper and within the next two months he is to present another paper relating to the treatment of each kind of Hypertension.

Doctor Carter wrote a "Brief on Obstetrics," mentioning maternal and foetal mortality rates in the United States. He discussed indications and usage of pituitrin and indications and uses of forceps.

Both members will complete their articles and deliver them at meetings to be conducted in the near future. The subjects were discussed by all present and the meeting proved most interesting.

Doctor W. F. Boyers, president, has appointed Doctors E. W. Howard, C. O. Henry and G. H. Traugh as a committee to prepare for the next tri-county meeting to be held late this month or early in October. Harrison and Monongalia counties will participate.

The program committee has appointed Doctors L. N. Yost, A. L. Peters with Doctor G. R. Miller as alternate, to prepare papers for the program for August 31. This meeting may be held in Fairview. The society would like to hold one meeting each year in Fairview, Mannington, Farmington, Monongah and Worthington if suitable meeting places can be obtained. Thus the society is going out to the men in the smaller communities instead of asking these members to come into the city of Fairmont.

Doctor C. S. Lawson, of Boothesville, has applied for membership and his application has been referred to the board of censors. The following attended the meeting: J. M. Trach, G. H. Traugh, C. L. Parks, W. F. Boyers, C. J. Carter, P. F. Prioleau, A. L. Peters, J. R. Tuckwiler, C. O. Henry, E. W. Howard, G. R. Miller, W. L. Coogle.

—G. H. TRAUGH, Sec'y.

Mercer

The Mercer County Medical society met July 28 at Shawnee Lake with Dr. J. R. Vermillion, presiding. Minutes of the previous

meeting were read and approved. Unfinished business was taken up along with new business. A bill for $44.10, presented by Dr. R. O. Rogers and representing advertisements published in *The Daily Telegraph* last December, was laid on the table for future consideration; a bill for $10.03 for stamps and stationery was allowed as was another for $5 for extra stenographic services.

The subject of a joint picnic between the Mercer and McDowell Medical societies was discussed and it was decided to invite McDowell doctors and their wives to join with us in a picnic at Shawnee Lake the last week in August. The secretary was authorized to designate members of committees to act in conjunction with committees from McDowell in making arrangements for the outing.

The report of the committee on Medical Relief in Disaster, as published in the Bulletin of the A. M. A., June, 1926, was considered, but action was deferred.

Dr. D. P. Lepper, city health officer, of Bluefield, gave an instructive talk on "The Health Department's Preventive Health Program." He explained how health officers follow much the same program in establishing preventive measures to guard the public health. For instance, in this section where we do not have malaria, the health officer does not take the preventive measures that would be taken in malarial districts. Most of his time is taken up with milk and water problems, school and vaccination statistics, water supplies of the country, health work and health units, and safe and adequate springs and water supply. He pointed out that one of the best means of insuring safe water is to protect the watershed from which the supply is obtained. Among other points Dr. Lepper brought out the following:

It is very important to look after the sewage system of a city. It might be necessary to have the ideal septic tank. The old outhouse must go.

People in any community are entitled to a good milk supply. We should look after the milk carefully from the dairy to the family. The first aim of the Health Department is to have clean and safe milk. It is our wish to effect the maximum percentage of pasteurization that the city will support.

It aims to improve as rapidly and as much as possible the quality of the milk before pasteurization.

It aims to improve the quality of the milk which remains unpasteurized.

It aims to encourage greater milk consumption, to get the cooperation of the dairy industry, and to scan the milk supply from the dairy to the consumer.

Doctors and health officers should look after the children before they start to school in the fall. They should be vaccinated against smallpox. Detroit has a good health department, but on account of getting a little careless they lost 125 smallpox patients last year. Some people have a horror of vaccination. Do not bandage or protect the vaccination with bunion plasters. Allow it to stay open and be exposed to the air. This prevents tetanus.

In diphtheria it is important to find Klebs-Loffler bacillus. We have reduced the death rate in diphtheria from 50 per cent to 60 per cent to 15 per cent, and we want to reduce it still more. We want to stamp out the disease entirely. It can be prevented by giving toxin-antitoxin. If 95 per cent of our school children are protected in this way we can stamp it out. It should be given to children from two years old up to a high school age. One of the many conditions we have to deal with is the diphtheria carrier. In California cultures were made from the noses and mouths of school children, and 3 per cent were diphtheria carriers. Diphtheria carriers should be quarantined or kept from school until two negative cultures are made. In the country they should be kept out of school from ten days to two weeks.

There was quite an epidemic of measles in Bluefield recently. Measles is a dangerous disease. Parents should not permit their children to contract measles or whooping cough. Ten thousand children die in the United States each year from these two diseases. At present there are in Bluefield under quarantine two cases of measles, nine cases of whooping cough, and two cases of typhoid fever. It is not a question of quarantine in whooping cough, but a question of isolation. Isolate the children 30 yards away from any other child for four or five weeks.

Seven weeks is the state law before they may return to school.

Under discussion the president called on Dr. Sam Holroyd, who said: "I sympathize with Dr. Lepper on account of the lack of co-operation of the medical profession. We should be more loyal to our health officers. There is a tendency in our profession to say the other fellow does not know what he is talking about. Never expose the mistakes of fellow practitioners to patients. Go to him and talk to him quietly about it. We should have more loyalty in our professional relations and stand closer together. We are a small percentage of this population, I mean, the medical men and we are getting fewer every year on account of the ups and downs among ourselves. We must be loyal to each other."

Dr. Rogers commended everything Dr. Lepper said, declaring: "It is our duty to support the health officers of this community."

Dr. Peters, of Maybeury, McDowell county, was next called on, and he said: "I wish we had someone in McDowell county of Dr. Lepper's ability to look after the health of our county."

Dr. Peters was informed of the joint picnic in August and was asked to invite as many of his people as he could.

—H. G. STEELE, Sec'y.

Ohio County

Dr. D. B. Best was in Northern Michigan fishing out in mid-stream for trout. Anyone wishing to know how to land a battling two pounds of that elusive sport fish, also where to go to get them, should consult him.

Dr. George Abersold and Dr. Harry Nolte have returned from the region about Saranac Lake. George informs us he met many tubercular patients who are doing various things. He met several doctors. He says that those desiring first hand knowledge of tuberculosis should get it in this way and that he learned more about the disease than in all his past years.

Dr. Joe Caldwell is vacationing at his cottage on Lake Erie.

Dr. H. W. Bond has moved his offices from his former connection with Drs. Caldwell and Drinkard in the Wheeling Steel building to the Central Union Trust building.

Dr. W. A. Quimby, X-ray specialist, is now located in an elegant suite of offices in the new Central Union Trust building.

Dr. David Aikman has gone to Lake Chatauqua. We understand the program is quite impressive there this year.

Dr. Thomas Klug was married August 10 at Littleton, W. Va., to Miss Joanna Murphy. A number of friends of both parties from the Wheeling Hospital attended. Everyone wishes the former technician and former interne a happy future.

A first class slump hit the Art of Healing here in July and August. The so-called toilers and the farmers complain bitterly when the works shut down or the crops are a little poor. In fact they ask the government to step in and make it a sure thing for them. The medical profession as usual takes its medicine and keeps quiet. You would not know there was "nothing doing" until a crowd of doctors get together and one of them —a hardy soul—has the courage to say, "I didn't have a soul in the office yesterday." Then the others, feeling confession is good for the soul, open up and you find it is general and not individual and "oh, isn't it a grand and glorious feeling."

Dr. Ivan Fawcett has returned from Alaska. He had a wonderful trip full of thrills and excitement. He believes you can even get too much Rocky Mountain scenery so he feels it is restful to get back to the quiet West Virginia hills—and to everyday professional work. —H.M.H.

STATE AND GENERAL NEWS NOTES

TWO CHANGES IN HOSPITAL OWNERSHIP ARE ANNOUNCED

Since the last *Journal* two important changes in hospital ownership have been announced that will prove of interest to the medical profession of the state.

Doctor George A. MacQueen, for many years owner of the Kanawha Valley hospital of Charleston, has acquired the controlling interest in the Hoffman hospital at Keyser and is to assume charge there at once. Dr. MacQueen is a past president of the state association, former mayor of Charleston and a candidate for the Democratic nomination for governor in 1924. The Hoffman hospital was operated by Doctor C. S. Hoffman, also a past president of the state association, until the time of his death last spring.

Doctor H. L. Goodman formerly chief of the state miners' hospital at McKendree, with Doctor W. L. VanSant of Hinton, has taken over Doctor Love's Private hospital in Ronceverte and hereafter it will be known as the Greenbrier Valley hospital. Dr. Goodman will be surgeon in charge and Dr. VanSant will be visiting surgeon. Dr. Goodman took charge July 15.

CENTRAL TRI-STATE MEETS IN HUNTINGTON, SEPT. 9

Invitations have been extended for the third meeting of the Central Tri-State Medical society to be held in Huntington, W. Va., September 9 at 2 p. m. The following program will be presented:

"Problems and Practice in Biliary Surgery," by W. Wayne Babcock of Philadelphia.

"The Management of Labor," by P. Brooke Bland of Philadelphia.

"The Surgical Treatment of Colitis and Demonstrating the Method of Operating Upon Ano-Rectal Disease Under Local Anesthesia," by S. G. Gant of New York City. This lecture will be illustrated with motion pictures.

During the dinner, to be served in Hotel Prichard, the place of the meeting, a business session will be conducted at which the constitution and by-laws will be presented for adoption.

Indications are that this session will attract a large attendance. With more than 300 present at the opening meeting, and more than 500 at the second session, this new society promises to become one of the most important in the middle west. Doctor T. W. Moore is president, and Doctor F. O. Marple is secretary.

MIGRAINE

RIGGS, in *Minnesota Medicine*, February, 1926, recommends large doses of calcium lactate at the first indication of an attack of migraine. Thirty grains repeated in three hours. It should be fresh as age renders it inert. He quotes Hurst as follows:

"In migraine there is a constitutional tendency for the brain to become, under certain circumstances, a storm center. Do these patients possess a peculiar inability to utilize calcium? Is this an explanation of brain instability? It would seem from the remarkable benefit derived from the use of this drug that this is highly probable."

Riggs also quotes Sherman as saying:

"The ordinary diet of Americans in cities and towns is probably more deficient in calcium than any other chemical element. The body contains normally about three pounds of calcium. There is a physical factor in migraine that must be taken into account."

ARRANGE PROGRAM FOR MEDICAL COLLEGE MEET

Officials of the Association of American Medical colleges have arranged a tentative program for the thirty-seventh annual meeting to convene in Cleveland, October 25 and

continue three days. Hotel Statler will be headquarters. It reads:

Relation of Collegiate to Medical Student Scholarship—John A. Wycoff, University and Bellevue Hospital Medical College.

Determining the Fitness of the Pre-medical Student—Franklin D. Barker, University of Nebraska.

Study of Disposition of Applicants For Admission to Schools of Medicine for 1926-27—Burton D. Myers, Indiana University.

Combined Baccalaureate Courses—Stuart Graves, University of Louisville.

Extent of Specialization in Medical Practice—H. G. Weiskotten, Syracuse University.

What Becomes of the Woman Graduate? —Martha Tracy, Woman's Medical College.

Cost of Medical Education—Fred. C. Zapffe.

Teaching of Medical Economics—Albert T. Lytle, University of Buffalo.

A Study Conference Course—J. W. Pryor, University of Kentucky.

The Irreducible Minimum Curriculum—W. F. R. Phillips, Medical College State of South Carolina.

Round Table Conference

System Used for Junior and Senior Clerkships in Medical Wards and Medical Dispensary—John W. Moore, University of Louisville.

The History of Medicine; the Backbone of Teaching in Clinical Medicine—Charles P. Emerson, Indiana University.

Student Assistants in Medical Courses—A. P. Mathews, University of Cincinnati.

Senior Student Acting Interns—Russell H. Oppenheimer, Emory University.

An Experiment in Teaching Physiology—Alfred C. Redfield, Harvard Medical School.

An Experiment in Education—Hugh Cabot, University of Michigan.

Use of Pathological Museum in Teaching Medicine and Surgery—Howard T. Karsner, Western Reserve University.

A New Plan in Medical Education—M. C. Winternitz, Yale Medical School.

Executive Session.

BOOK REVIEWS

Elements of Pathology

Aller G. Ellis, M. Sc., M. D., has made a laudable effort to smooth the road to pathology for the student. His "Elements of Pathology" is such as I have been hoping would appear for some time. Several authors have written condensed works on this subject, but with only slight success. His is condensed, that is he has made a real effort to cut out all the padding and accomplished his aim rather well. However, the illustrations are too few and many of them are poor. I like to see a well illustrated book with the artistic part original. I am sorry to see his failure in this respect. I believe he could have done better.

In the preface, it is mentioned that an attempt has been made to show the close relation of pathology to problems of internal medicine and surgery. Pathology in itself is the basic foundation of all medical and surgical knowledge. Where is there a department of study that will bring such light as pathology, in all the realm of medicine? Showing the way of disease and death, it lays the key of health at our feet.

Pathology, the last of the departments of medical science to become popularized, seems to be slowly coming into its own. Few physicians ever give it any attention after graduation, fewer still ever work at it to any extent and it is a rare AVIS that can take a specimen in his hands examine it with joy in his heart while the picture of the lesion passes before his mind's eye in panorama in all its significance, variations and reactions.

Aller G. Ellis, M. Sc., M.D., has done well.

—M. D. G.

Abdominal Surgery

The Fourth Editon of Abdominal Surgery by Moynihan, in two volumes, (W. B. Saunders Company, Philadelphia), is well written, good type and well illustrated. The writer at once gains the American Surgeon's confidence by his free quotations and abstracts and due recognition of other great

surgeons the world over. He is not dogmatic and gives one the impression of a surgeon who, though a master in his art, is still willing to adopt methods which might enable him to procure better results, both as to mortality and morbidity. You are not burdened by statistics, but sufficient statistics are given to be of value.

The responsibility of the surgeon to his patient is beautifully outlined and the patients' welfare is given first place throughout. Of course there are a few chapters which, while interesting reading, are of little value to the American Surgeon, such as operating room technique and preparation of catgut, etc., since most modern American hospitals have good technique and we all depend on the manufacturers for a better and safer catgut than we could prepare.

But this edition is one that no surgeon should be without. Many new and helpful suggestions are fully set forth, and it covers practically the entire field of abdominal surgery. —T. E. R.

STATE MEDICAL BOARD LICENSES THIRTY-EIGHT

Thirty-eight applicants for licenses to practice medicine in West Virginia were successful in the mid-summer examinations conducted at Martinsburg, according to announcement of the state department of health. The list follows:

William Konrad Kalbfleisch, Wheeling, University of Munich, 1921; John Francis Moriarty, White Sulphur Springs, Jefferson Medical College, 1924; Newman Houghton Dyer, War, University of Maryland, 1926; James F. Folk, Durbin, Medical College of Virginia, 1926; Edwin Sayre Woodward, Parkersburg, University of Maryland, 1925; William Ralph Counts, Welch, Medical College of Virginia, 1926; Edward William Wood, Welch, Medical College of Virginia, 1926; Thomas Godfrey Reed, Shepherdstown, Jefferson Medical College, 1926; Samuel Basil Souleyret, Wheeling, University of Louisville, 1925; Sobisca S. Hall, Weston, Rush Medical College, 1925; Gustave Selbach, Wheeling, University of Giessen, 1921; Lewis Lee Liggett, Fairpoint, Ohio, Ohio State University, 1926.

Ersie Van Teagarden, Cameron, University of Maryland, 1926; Robert Paul Hagerman, Baltimore, Md., University of Maryland, 1923; William Frank Work, Blue Creek, Medical College of Virginia, 1926; Thomas Hal Clarke, Jr., Sumter, S. C., University of Virginia, 1925; Paul Yost, Fairmont, University of Cincinnati, 1925; George Blackmore Rush, Newell, Jefferson Medical College, 1926; Turner Pursley, Logan, Vanderbilt University, 1924; Orman Crawford Campbell, Princeton, Medical College of Virginia, 1926; Reginald King Shirkey, Welch, Queens University, 1926; Jack Smiley, Gilbert, Medical College of Virginia, 1926.

Robert W. Chambers, Dameron, Jefferson Medical College, 1925; Ashby David Ferrell, Talcott, Medical College of Virginia, 1926; Samuel Berardelli, Follansbee, Loyola University, 1926; Harry Donavan Chambers, Dameron, Jefferson Medical College, 1925; Stanley R. White, Morgantown, Tennessee Medical College, 1925; Francis Paul Kenney, Morgantown, Indiana University, 1925; Russell Kessel, Ripley, Jefferson Medical College, 1925.

Holmes F. Troutman, New York City, University of Pennsylvania, 1908; S. E. Gunn, Sutherland, Va., Medical College of Virginia, 1926; Thomas B. Gordon, Charleston, Medical College of Virginia 1926; Clifton William Hensen, Covel, Medical College of Virginia, 1926; Aaron Burleigh Spahr, Bramwell, Medical College of Virginia, 1926; Arthur Eugene McClue, New Cumberland, University of Louisville, 1925; Milton Carter Borman, Montgomery, University of Pennsylvania, 1924; Roy McKinley Rhodes, Charleston, Medical College of Virginia, 1926; Emory Vinton Jordan, Baltimore, Md., Medical College of Virginia, 1926.

PARTNERSHIP DISSOLVED

Announcement has been made that effective September 1, the partnership that has existed in Charleston for the last seven years

between Doctors V. T. Churchman, Sr., and J. A. Arbuckle will be dissolved by mutual agreement. Dr. Arbuckle is opening offices in Charleston to specialize in ophthalmology and he likely will be on the staffs of one or two Charleston hospitals.

Dr. Arbuckle's position in the Churchman Eye and Ear hospital will be filled by Dr. Churchman's son, Dr. V. T. Churchman, Jr., who has been assisting in the hospital for more than three years.

DR. HAYMOND DIES

Doctor Luther Haymond, of Clarksburg, licensed by the state board of health in 1903, died suddenly July 17 in the Kessler-Hatfield hospital, Huntington, of cerebral hemorrhage. Dr. Haymond was 50 years old, a former member of the legislature and a veteran of the Spanish-American and World wars. He was widely known as a sportsman and frequently officiated at racing meetings in West Virginia.

"FAT REDUCER" VALUELESS

The McGowan Laboratories, Inc., of Chicago, and the Womanhood Publishing Corporation, of New York City, are charged, in a complaint issued against them by the Federal Trade Commission and made public on August 16, with using unfair methods of competition in interstate commerce.

The alleged unfair methods of the respondents were said by the commission to have consisted of the "advertising by the respondents of 'McGorman's Reducine,' a compound manufactured by respondent McGowan Laboratories, Inc., and advertised in *True Romances*, a magazine published by respondent Womanhood Publishing Corporation, as a compound which will permanently dissolve excess flesh through a chemical reaction while, in truth, said compound is useless and of no value for the purposes advertised."

The commission has set the case for hearing on September 1.

CIVIL SERVICE POSITIONS OPEN; TEST DATES FIXED

The U. S. Civil Service Commission, Washington, D. C., announces open competitive examinations for:

Medical Officers to fill vacancies in the Indian Service, the Public Health Service, the Coast and Geodetic Survey, the Panama Canal Service, the Veterans' Bureau, and other branches, applications to be rated as received until December 30.

Physiotherapy Aide and Physiotherapy Assistant, applications to be on file not later than October 9, or November 27.

Occupational therapy aide and occupational therapy pupil aide (arts and crafts), occupational therapy aide (trades and industrial) and occupational therapy aide (agriculture), applications to be rated as received at Washington, D. C., until December 30.

Social worker (psychiatric), applications to be on file at Washington, D. C., not later than September 21.

Graduate Nurse and Graduate Nurse (Visiting Duty), applications to be rated as received until December 30.

Full information and application blanks may be obtained from above named Service, or the secretary of the Board of U. S. Civil Service Examiners at the postoffice or custom house in any city.

LOCATES IN MONTGOMERY

Milton C. Borman, A. B., M. S., in Physiology (University of Wisconsin) M. D., (University of Pennsylvania), announces his association with Drs. William R. Laird and Ben F. Brugh at Montgomery, W. Va., practice limited to internal medicine. Dr. Borman has had two years' teaching in pathology and one year's teaching in physiological chemistry at the Medical School, University of Pennsylvania, and has been on the staff of the Pennsylvania Hospital, Department of Mental and Nervous Diseases, for one year. Has also had two years' service as resident at the Philadelphia General Hospital. He has published studies on original research in physiology, pathology and neurology.

RETURNS FROM EUROPE

Doctor W. S. Shepherd of Charleston, eye, ear, nose and throat specialist, has returned from Vienna and London where he studied in public clinics.

ONE CHIROPRACTOR PASSES STATE BOARD EXAMINATION

But one of ten chiropractors who took the state board examination at Martinsburg in July was successful, according to the state department of health. Another almost got under the wire but, on August 14, there still was some doubt as to whether he would be passed upon by his fellows. There was some difference of opinion between the two chiropractors on the examining board with respect to the papers submitted by the applicant.

A feature of the examination was the total failure of Palmer school graduates to make a showing. Six of the ten applicants said they were graduates of the Fountain Head of Chiropractic and four of them submitted diplomas showing graduation in 1925 and 1926. Two claimed graduation in 1920.

While state health officials refused to comment upon the failures, it is significant that all of the Palmer students received low grades.

MEETING SCHEDULED

The American Electrotherapeutic association will hold its annual meeting September 8-11 in Atlantic City, headquarters at Hotel Ambassador. Dr. Victor C. Pederson of New York is president.

DR. WALKUP ILL

Doctor H. A. Walkup, president of the Fayette County Medical society, is reported ill August 15 at his home in MacDonald.

CHANGES LOCATION

Dr. G. A. Smith, formerly of Page, W. Va., where he was in practice for several years, is now locating in Montgomery, W. Va., and will be associated in group practice with the Coal Valley Hospital staff. Practice limited to eye, ear, nose, throat and bronchoscopy.

PUBLIC HEALTH ACTIVITIES AND NEWS NOTES

Cumming Reviews Work

Developments in public health work in the United States during the last quarter of a century have been marked with many discoveries relating to prevention and treatment of disease, Surgeon General Hugh S. Cumming, of the United States Public Health Service, announced orally on August 13, according to *The United States Daily.*

Under the authority of law, Dr. Cumming said, the Public Health Service has within the last 25 years carried on special investigations in tuberculosis, influenza, pneumonia, anthrax, amebiasis, botulinus poisoning, hookworm, leprosy, malaria, meningitis, pellagra, plague, Rocky Mountain spotted fever, trachoma, tularemia, typhoid fever, child hygiene, industrial hygiene, excreta disposal and stream pollution. These experimentations and researches were conducted and are being conducted at the various field stations maintained by the Public Health Service, and at the Hygienic Laboratory in Washington.

Dr. Cumming enumerated some of the achievements of the Health Service during the past quarter century, the most outstanding of which, he said, was the eradication of smallpox and the supervision and control of cholera in the Philippine Islands. In addition, he spoke of the work of the Service in the control of bubonic plague on the Pacific coast by the destruction of rats and ground squirrels and the rat-proofing of buildings; control of bubonic plague in New Orleans and Porto Rico by the same measures.

Other accomplishments were noted as follows:

Cholera successfully prevented from reaching the United States without interruption of commerce in the European epidemic of 1910, through new quarantine procedures developed by the Service. During the World War the Health Service successfully protected the health of the military forces of the United

States in the areas contiguous to the camps. Without such control, Dr. Cumming said, the camps would have been menaced to an unprecedented extent by malaria, typhoid fever, cerebrospinai meningitis, and venereal diseases.

In addition, the Surgeon General said, as a result of the Health Service's investigations, important contributions have been made to the prevention and control of yellow fever, cholera, pellagra, beriberi, leprosy, malaria, diphtheria, trachoma, typhus, tularemia, measles venereal diseases, Rocky Mountain Spotted fever, hookworm and typhoid fever. Important contributions, he also said, were made to immunity from disease, purification of polluted oysters, disinfection, stream polluton, milk safeguarding, and the organization of State health departments and hospital service.

Development of Health Work Told

In recounting the development of public health activities in this country, the Surgeon General declared that in the early history of the country the most important cities usually situated on the seaboard, felt the necessity for organization to fight the pestilences, and created boards of health. The establishment of State boards came only with later development of the country, increase in population, wealth, commerce and sanitary knowledge and improved facilities of communication. Prior to 1872, Dr. Cumming said, only four States (Massachusetts, California, Virginia, and Minnesota), and the District of Columbia, had established boards of health, and only 12 States up to and including 1872. Within the past 10 years, he said, many States have created Departments of Health and made important administrative changes.

Within the last 25 years many foreign countries have established departments or bureaus of health, Dr. Cumming asserted. Of 70 principal foreign countries in 1920, 12 had independent ministries of health.

Death Rate Declines

The death rate for the registration area of the United States during the calendar year 1924 was 11.9 per 1,000 population, as compared with the rate of 12.3 per 1,000 population for 1925, it has been announced at the United States Public Health Service. For the year 1922 the rate was 11.8 per 1,000.

The lowest mortality rate recorded for the country was 11.6 in 1921. It was said at the Health Service that the death rate for the colored population in the registration area is always considerably higher than the rate for the whites. In 1922 the rates for the colored population was 15.7 and for the whites 11.4 per 1,000. Females of all races in the United States live somewhat longer than males.

Infant Mortality Rates

Columbus, Miss., is shown to have had the lowest infant mortality among the white population during 1924, and Seattle, Wash., the lowest among the colored inhabitants, according to a report of infant mortality just issued by the Department of Commerce. Their respective low mortality rates for white and colored infants were 30.0 and 33.7 deaths per 1,000 births.

Leavenworth, Kans., the report states, had the greatest percentage of colored infant mortality during 1924, the deaths totaling 571.4 per 1,000 births. The highest mortality among white infants was registered at Florence, S. C., 130.1 deaths having occurred during 1924 to 1,000 births.

The data as given out by the Department of Commerce includes the number of deaths (exclusive of stillbirths) of infants under 1 year of age per 1,000 births, by color, for selected cities, arranged by decreasing ratios for the colored during the year 1924. The table given includes cities in the birth registration area of more than 10,000 population having either not less than 10 per cent or 10,000 colored population.

Takes Up New Duties

Doctor John Thames, Kanawha county's chief of its full-time health unit, is opening offices in the court house September 1. He is to take immediate steps to perfect his organization and operation of the unit will be-

gin immediately. It has been estimated that the cost of this health unit to the county will be approximately $20,000 a year, a part of this sum being supplied by the state.

Dr. Thames comes to Charleston from Preston county where he has been secretary of the medical society for the last year and twice a delegate to the state association meetings. Prior to engaging in public health work, Dr. Thames was a practicing physician in Little Rock, Ark.

His article on the relationship of the full-time public health unit to the medical profession, read at the last annual meeting in Morgantown, will be found starting on page 449 of this issue of *The Journal.* In his introductory remarks at Morgantown he declared that he was a "health officer who does not practice medicine."

New Public Health Section

The newly created public health section of the West Virginia State Medical association will hold its first meeting in connection with the sixtieth annual meeting which will be held in White Sulphur Springs next June. Doctor David Littlejohn of the state department of health, is chairman of this committee; and his associates are Doctors John Thames of Charleston, and Will McLain of Wheeling.

FRIEND TO PATERNALISM

The chairman of the Committee on American Citizenship, F. F. Dumont Smith, of Hutchinson, Kan., presented an interesting report at the Denver convention of lawyers. The report was more than frank. It asserted that many distinguished lawyers freely admitted that they were not "up" on the subject of the Constitution, and that it was time to make the law schools do a better job on instruction.

"The Roman citizens," declared the report, "bartered their ancient libraries for bread and circuses. The American citizen today freely barters his individual liberties and rights for government bounties and bonuses. He demands government interference in everything and surrenders freedom and his individuality for it."

Plain talk and true. There was much plain talk at the convention—militant talk with reference to many propositions which heretofore have been given clear right of way and have been referred to, if at all, in awed whisperings by contemporary statesmen so-called. The report continued:

"The old virile spirit is waning to extinction. The American citizen is being pauperized by government alms. If he supports the government he asks the government in return to support him. If prices are too high, instead of doing without, he wants the government to lower them; if they are too low, he wants the government to raise them.

"He wants the government to build his roads, educate his offspring, sanitate him, physic him, bring his children into the world, prescribe his dietary, and tell him what to believe in matters of conscience.

"This tendency, constantly accelerated, is furthered by powerful groups, some of whom have selfish interests at stake, but by many whose leaders are impelled by the loftiest motives and seek them on the grounds of economic or social welfare."

The report declared that these tendencies are replacing representative government with an autocratic bureaucracy.

It asserts that it is apparent that the time is approaching when the states may be reduced to mere geographical expressions, to the rank of counties, when all important powers will be centralized in Washington, "when the bill of rights will become a mere scrap of paper, and this government will come, as all other democracies have come, to a centralized despotism."

This report was not made by politicians, but by lawyers facing conditions that should be known of all men. But as there are lawyers who are not familiar with the Constitution, or are indifferent to its stupendous appeal, so there are a great many citizens who are ignorant and indifferent touching the most vitally important matters of government. If centralization is to increase at Washington, the citizen will have himself to blame. Bread and the circus are poor pay for the loss of liberty.—*The Cincinnati Enquirer.*

THE SHEPPARD-TOWNER ACT: ITS PROPOSED EXTENSION AND REPEAL

By WILLIAM C. WOODWARD, M. D.

Executive Secretary, Bureau of Legal Medicine and Legislation of the American Medical Association.

Chicago, Illinois

[NOTE—While the appropriation providing for operation of the Sheppard-Towner act for 1927-1928 failed of passage in the last session of Congress it is anticipated that its proponents will seek to revive it when Congress reconvenes. The medical profession is opposed to any further extension because, among other things, this act usurps state's rights and is a most pernicious form of paternalistic government. Therefore, for the information of our readers, THE JOURNAL will publish a series of two articles prepared by Dr. Woodward explaining just what Sheppard-Towner is and how it operates.]

The term "Sheppard-Towner Act" is the popular designation for "An Act for the promotion of the welfare and hygiene of maternity and infancy, and for other purposes," approved Nov. 23, 1921. Exactly six months after the approval of this act, the House of Delegates of the American Medical Association adopted a resolution condemning it as "a type of undesirable legislation which should be discouraged." The act itself authorized appropriations to carry it into effect until June 30, 1927. If appropriations are to be made to carry it into effect after that date, it is necessary for the guidance of the federal budget makers and of the several state legislatures meeting in January, 1927, that legislation to that end be enacted at the present session of Congress. Bills for that purpose were introduced into the Senate and the House of Representatives, as reported in the *Journal* [1] at that time, authorizing appropriations for two additional years. The bill introduced into the House was passed. In the Senate, the Committee on Education and Labor has recommended the passage of the House Bill, but recommended that the period of the proposed extension be reduced from two years to one and that a definite date for the discontinuance of aid under the Sheppard-Towner Act be now fixed. With those recommendations the bill now awaits action by the Senate. In the meantime, another bill (H. R. 10986, "A Bill To repeal an Act entitled 'An Act For the promotion of the welfare and hygiene of maternity and infancy, and for other purposes,' approved Nov. 23, 1921, and amendments thereto") has been introduced in the House of Representatives. It seems worth while, therefore, to inquire into the nature of the original Sheppard-Towner Act, so as to facilitate intelligent action on the bills now pending and to promote a constructive program for future action should the life of the act be prolonged.

Purpose and Scope of the Sheppard-Towner Act

The Sheppard-Towner Act authorizes federal appropriations to stimulate and aid the states in protecting and promoting the health of mothers and infants. It denies aid, however, to every state that will not subject its activities to the supervision and control of a federal bureau and a federal board and that will not appropriate from the state treasury money to match the federal subsidy. If the state's plans for the hygiene of its mothers and infants are not pleasing to the federal board, no federal funds are forthcoming. If the federal board does not like the way the state is carrying its plans into effect, the board can discontinue federal aid. Each state must determine whether it will or will not accept the proffered subsidy and submit to

1. Protest the Sheppard-Towner Act, J. A. M. A. 86:421 (Feb. 6) 1926.

federal supervision and control. Connecticut, Illinois, Kansas, Maine and Massachusetts have steadfastly refused to do so. The federal government is represented in the case primarily by the Children's Bureau, a lay bureau in the Department of Labor. The chief of that bureau, however, functions also as a member of the Board of Maternity and Infant Hygiene, her co-members being the U. S. Commissioner of Education and the Surgeon General of the U. S. Public Health Service. The administration of the act is entrusted to the Chief of the Children's Bureau, the board having authority merely to pass on the adequacy of state plans and activities.

It can be readily seen from the foregoing analysis of the Sheppard-Towner Act that it empowers the federal government to use money, collected from the people through federal taxation, to induce or compel the several states to surrender to the federal government the right to supervise and control the hygiene of maternity and infancy within their respective state borders. That the federal government has no right to control such matters by direct federal legislation seems to be universally conceded. The question as to whether it has the right through the devious agency of conditional federal subsidies, as provided in the Sheppard-Towner Act, to accomplish that which it cannot accomplish directly has been presented to the United States Supreme Court for decision. The court held, however, that it could not properly pass on the question in the form then submitted, because the determination of the question submitted lay within the discretion of Congress, a coordinate branch of the government, and was not subject to review by the court. (Commonwealth of Massachusetts v. Mellon, and Frothingham v. Mellon, 43 Sup. Ct. Rep. 597.) No one has yet found a way of bringing the situation before the United States Supreme Court in a form in which that court can pass on it, and the constitutionality of the act remains therefore undetermined.

Proposed Extension of the Sheppard-Towner Act

Some of the proponents of the Sheppard-Towner Act now contend that the act is permanent legislation. Up to the time of their recent declarations, however, it had been commonly believed that the act was temporary, limited by its own express provisions that authorized appropriations only until the fiscal year ending June 30, 1927. That view seems to be borne out by the now admitted necessity for specific legislative authority for any appropriation to continue operations under the act after the period stated; for if the act is permanent in character, new legislation should not be needed to enable Congress to make appropriations to carry it into effect.

In the hearings before the House Committee on Interstate and Foreign Commerce preceding the enactment by the House of Representatives of the bill to authorize appropriations for two additional years, the proponents of the legislation admitted that, if the purposes of the Sheppard-Towner Act as conceived by them are to be accomplished, an extension for two years was insufficient and that other extensions would probably be sought. They were unwilling to state any definite time by which, in their judgment, the purposes of the act would be accomplished. The House of Representatives looked complacently on the prospect of repeated appeals for extensions of the act and passed the bill providing for a two-year extension. In the Senate, the Committee on Education and Labor recommended that the bill passed by the House be enacted, but only after amendment reducing the extension of the act from two years to one. In the opinion of the committee, it seems, the work undertaken by the federal government under the Sheppard-Towner Act belongs in principle to the states and should be allowed to revert to them as soon as practicable. At present writing, the bill, with the committee's proposed amendment, is pending in the Senate. The bill providing for the repeal of the Sheppard-Towner Act is pending before the Committee on Interstate and Foreign Commerce of the House of Representatives.

Fallacies of the Sheppard-Towner Propaganda

In recent hearings before the House Committee on Interstate and Foreign Commerce, as in all other propaganda in support of the Sheppard-Towner Act, one looks in vain for facts and figures showing a reduction in maternal and infant mortality through the operation of the act. The best way to pass on the merits of the pending legislation to extend the act or bring about its repeal seems to be, therefore, to examine the arguments commonly offered in support of the Sheppard-Towner plan.

1. In support of the Sheppard-Towner plan it is commonly urged that maternal and infant mortality in the United States is excessive, as compared with maternal and infant mortality in other countries, and therefore must be reduced. The comparisons offered by the proponents of the Sheppard-Towner plan, however, to show such excessive mortality in the United States do not justify the conclusion that such mortality is higher than in other countries; nor if it be higher, that such mortality in the United States can be reduced to foreign standards by legislative action, nor that the needful legislation could be enacted by the federal government more effectively than by the states.

Such figures as have been offered to show that federal interference is necessary have almost uniformly been unsupported by citations of the sources whence they came. It is impracticable, therefore, to determine their accuracy or weight, and to determine whether they fairly present the entire situation. No evidence has been offered by Sheppard-Towner proponents to show that the statistical methods in the countries whose mortality rates they have cited are identical with the methods used in the United States. All figures offered by the proponents of the Sheppard-Towner plan are crude figures; that is, figures not distributed according to race, economic conditions, individual diseases or classes of diseases, and other conditions, with which every death is inseparably bound up and a knowledge of which is the very basis of prevention. Obviously, such figures cannot be analyzed and compared so as to afford a basis for rational conclusions and intelligent preventive action. But even though maternal and infant mortality were shown to be higher in the United States than in other countries, that fact alone would not justify federal or even state action until after it had been determined that the conditions operative in such other countries to prevent excessive mortality could be duplicated in the United States. And if it were shown that such conditions could be duplicated in the United States, it would still remain to determine whether such duplication should be effected by the states or by the federal government.

The burden of proving that the federal government, rather than the states, should assume the obligation of bringing about within each of the several states conditions that would reduce maternal and infant mortality would certainly rest on the proponent. For our state governments are with practical unanimity conceded to be supreme in matters of health within their own respective borders. Such supremacy is conceded by the Sheppard-Towner Act itself, for through it the federal government seeks, not to force its way into the state health program, but to pay the state for the privilege of supervising and directing it. State supremacy in the field of child health was admitted by the federal government through the enactment of the two more or less ephemeral federal child labor laws, through which it was attempted to regulate the health of children within the states, not by direct action, but under color of federal taxation in one case and of the regulation of interstate commerce in the other; and in both instances the United States Supreme Court took the firm ground, not only that the protection of the health of its people was the right and duty of the state, but that the federal government was powerless to interfere even by such subterfuges as had been attempted (Hammer v. Dagenhart, 248 U. S. 251; Child Labor Tax case, 250 U. S. 20).

The proponent of the right of the federal government to interfere in the health activities in the several states on behalf of their mothers and infants because of the supposed neglect of the several states would find a difficult task before him. He would find that in practically every state, without federal in-

terference, there had been great reductions in infant mortality during recent years. If he carried his investigations into the period that has elapsed since the Sheppard-Towner Act was passed, he would find that its passage had not increased the rate at which that reduction was going on. He would find, too, that in some states in which the Sheppard-Towner Act has been accepted, infant mortality has increased. He would find that in those states that have not yielded to the terms of the Sheppard-Towner Act infant mortality has decreased quite as rapidly as in other states. He would find that the supposedly excessive maternal mortality in the United States as compared with corresponding mortality abroad may represent merely differences in statistical methods in stating such mortality and not differences in the mortality itself; and he would find that so far as decreases in maternal mortality have occurred during recent years, states which have declined federal assistance have records quite as good as those that have accepted it. On the whole, available evidence would hardly show that the federal government could accomplish any more in the field of maternal and infant hygiene than could be accomplished by the states themselves.

In the birth registration area of the United States, the infant death rate per thousand live births fell from 101 in 1918 to 76 in 1921.[2] With the Sheppard-Towner Act in effect, it fell from 76 in 1921 to 72 in 1924. The maternal death rate per thousand live births fell from 9.2 in 1918 to 6.8 in 1921, and during the next 3 years it fell from 6.8 in 1921 to 6.6 in 1924. In other words, the infant death rate declined 25 points in the 3 years preceding the enactment of the Sheppard-Towner Act and only 4 points in the 3 years following its enactment. The maternal death rate declined 2.4 in the earlier period and only 0.2 during the later. These figures are not cited to show that the passage of the Sheppard-Towner Act retarded the decline in infant and maternal mortality rates. They do show, however, that that act did not accelerate such decline.

2. The Sheppard-Towner Act stresses artificially the importance of maternity and infant hygiene. It does not take into consideration the relative importance of the various health activities in which a state must engage. It disregards limitations on the state's resources for health work and the possibility that to appropriate money to meet the requirements of the Sheppard-Towner Act it may be necessary to curtail essential activities in other fields. The act tends, therefore, artificially to unbalance the health program. From the standpoint of public health administration it is illogical and unwise.

The Sheppard-Towner Act arbitrarily assumes that maternal and infant hygiene present the supreme problem in health administration. It allots to each state as an available subsidy an amount arbitrarily determined by Congress, based on the total population of the state, disregarding all other health needs and all limitations on the resources of the state to meet such needs. The health activities of every state, however, extend into many fields. Adequate water supplies and sewer systems must be provided. The food supply must be supervised and controlled, particularly the milk supply. The spread of communicable diseases must be prevented. Swamps must be drained to prevent malarial fever. Some states must contend with the hook-worm problem; others need not. School hygiene is of vital moment everywhere. The hygiene of maternity and infancy presents but one of the state's many health problems. No state, however, under the Sheppard-Towner plan, can determine unbiased the relative importance of its various health problems and allot to each the money the state should rightly give to it on account of its inherent importance. Its judgment is warped by the proffered subsidy.

3. The distribution of money appropriated under authority of the Sheppard-Towner Act is arbitrary and irrational.

The Sheppard-Towner Act provides certain arbitrarily fixed federal bonuses that are distributed equally to every state that submits to the act. It provides other payments computed on the basis of the relation of the total population of the state to the total population of the United States. Neither of these dis-

2. Congressional Record 67:6721 (April 5) 1926.

tributive schemes has any logical relation to the needs of the state with respect to maternal and infant hygiene. The work to be done relates to infants and their mothers. The number of births recorded annually would therefore have come nearer to affording a rational numerical basis for distribution of the fund than would any other available figure. Incidently, the distribution of the Sheppard-Towner fund on the basis of recorded births would have been a most effective method of stimulating birth registration. Some states, however, have been blessed with climates and with racial distributions of population that have prevented any serious infant mortality problem from arising, or else such states have through their own efforts gone a long way toward solving such problems. Obviously, such states are not so much in need of subsidies as are the others. So far as figures alone afford a guide —and it is on the face of figures alone that the Sheppard-Towner fund is distributed— Oregon with an infant death rate in 1924 of only 53 certainly did not need a federal subsidy so much as did South Carolina with an infant death rate of 102. Utah with a maternal death rate in 1924 of 4.5 clearly did not need stimulation to improve that figure so much as did Florida, with a maternal death rate of 12.1. Nor is there any reason, so far as these figures show, why Oregon and Utah should be forced by the Sheppard-Towner Act to appropriate from their own funds for the lowering of maternal and infant mortality amounts of money in the same proportion, based on the total population, as might properly be required of South Carolina and Florida, if the Sheppard-Towner plan were workable on a logical basis.

4. The purpose of the Sheppard-Towner Act is presumably to increase state appropriations and state activities for the lowering of maternal and infant mortality. The subsidies provided by the act, however, do not necessarily accomplish that end. Such subsidies are presumed to be matched against appropriations for new or enlarged activities. But they may be matched equally well against appropriations that were regularly made before the Sheppard-Towner Act was passed. The mere reallocation of items in a state budget can produce an apparent increase in the appropriation for maternal and infant hygiene and in that way procure an increased Sheppard-Towner subsidy, without any increase whatever in the state's activity in the field of maternal and infant hygiene.

The cost of a campaign for the prevention of any communicable disease may be charged wholly against the appropriation for the prevention of communicable diseases, but as such a campaign is partly in the interest of infants and their mothers a part can be fairly charged against the appropriation for maternal and infant hygiene. In the former case, no federal subsidy can be obtained; in the latter a subsidy will be available. The cost of supervision and control of the milk supply can be entered in the budget against the cost of food inspection; but as the milk supply has such an intimate relation to the health of infants, a part of the cost can without dishonesty be charged against infant hygiene. If the former system of charging be adopted, no subsidy will be available; if the latter, the amount charged may be matched from the Sheppard-Towner fund. A state may reduce its normal appropriation for maternal and infant hygiene and yet obtain a subsidy. If a state cuts its appropriation in half, it can rely on the Sheppard-Towner subsidy to bring the fund back to normal. There is no certainty, therefore, that Sheppard-Towner subsidies will accomplish the end they are intended to accomplish. Apparent increases in state appropriations and state activities subsequent to the passage of the Sheppard-Towner Act must be studied so as to determine the methods by which such increases were brought about before it can be known whether they represent actual increases or mere paper increases, and the extent to which the Sheppard-Towner Act is entitled to credit for them.

5. The extent to which Sheppard-Towner Act produces increases or decreases in maternal and infant mortality cannot be determined by a study of mortality rates alone. It

must be shown by other evidence that but for the passage of that act such increases or decreases would not have occurred.

Maternal and infant mortality rates during any given period are computed on the basis of the number of births. In this respect they differ from other death rates, which are computed on the bases less readily ascertainable. If protective measures for mothers and infants are successful, demonstrable improvements in the corresponding death rates should promptly become apparent. If any such improvement is found, inference as to whether the Sheppard-Towner Act has produced it can readily be based on the time of its occurrence, whether before or immediately after the acceptance of the Sheppard-Towner plan by the state, and on an examination of the record to determine whether the variation was one that might have been expected because of antecedent circumstances independent of the Sheppard-Towner Act. A comparison between the death rate in the community under supervision and corresponding death rates in other communities not subject to the Sheppard-Towner plan is necessary. Unfortunately, the data offered by the proponents of the Sheppard-Towner plan in support of the proposed extension of it are not of this character. They are of the most general kind, not properly correlated to Sheppard-Towner activities, too often from interested sources and not infrequently from persons who are hardly to be regarded as competent to speak on the subject.

6. Maternal and infant health work cannot be separated from health work generally. If the government maintains supervision over maternal and infant health work in the states, it must ultimately gain control over all other health activities; otherwise there may be wasteful duplication of effort and a possible working at cross purposes by the federal and state agencies.

The Board of Maternity and Infant Hygiene has apparently found already that to limit infant hygiene to the field commonly regarded as the field of infancy is impracticable. Infancy is commonly understood to cover children in the first year of life and, at most, children in the first and second years. The board, however, has enlarged the meaning of the term "infancy" so far as operations under the Sheppard-Towner Act are concerned, to include all children below school age. With this as a precedent, and on the ground that an infant, in law, is a person who has not yet attained his majority, other extensions may be logically looked for. In Delaware, the Sheppard-Towner program included a campaign for a better milk supply. In Florida, dental clinics were established as a part of Sheppard-Towner activities. In Colorado, a gynecologist was provided for rural communities, the reason being, in part at least, to overcome "the great draw-back of shyness or timidity in having the local doctor make the examination." Such applications are the logical outcome of the failure of the act to define what it means by "the welfare and hygiene of maternity and infancy." In the absence of such a definition there seems to be no reason why Sheppard-Towner activities should not extend ultimately to the control of water supplies, sewer systems and housing, and more particularly to the control of the food supply, and to the prevention of communicable diseases, particularly venereal diseases. All activities in the fields named are certainly related intimately to the health of mothers and of women about to become mothers, and to the health of infants. But if the federal government extends its supervision and control so as to cover state health activities generally, what is the future function of the state in this field, if it has any?

7. The Sheppard-Towner Act involves a wasteful and unwise duplication of effort in federal health activities.

The work done under the Sheppard-Towner Act is primarily medical work. The United States Government has a highly organized Public Health Service for the execution of such work, under competent medical direction. The Children's Bureau, which is charged with the execution and enforcement of the Sheppard-Towner Act, is a lay bureau. For such medical supervision as it exercises it has to employ physicians, and even then, in last analysis, the work of such physicians and of all physicians employed by the several states under the Sheppard-Towner subsidies,

and all medical work whatever done under the act, is under the direction and control of the lay chief of the Children's Bureau.

8. The proponents of the Sheppard-Towner Act claim that the interest of the federal government in mothers and babies justifies it in subsidizing in their behalf state health activities and in taking over the supervision and control of them. If so, the interest of the federal government in persons of other ages obviously would justify it in providing subsidies in their behalf and in taking over the supervision and control of health work for them also.

Boys and girls, the youth of the country, and men and women of all ages are as important factors in the life of the nation as are infants and mothers. The wealth of the nation has already been expended to make them producing economic units in community life and to make them available to protect the nation in case of war. To them, the federal government must look for the care and nurture of coming generations and even for the care and nurture of mothers and infants, on whose behalf the Sheppard-Towner Act expresses such solicitude. Obviously, the federal government has an interest in youth and adults quite as great as its interest in mothers and babies. If the federal government has the power to buy from the states the right to supervise and control health activities in behalf of mothers and infants, it has the power to buy also the right to supervise and control health work for youth and adults. But if the federal government can buy from the states the right to supervision and control of state health activities, vested by the constitution in the states, there is no reason why the federal government should not likewise buy other constitutional rights of the states. It is to that end that the Sheppard-Towner Act seems to lead. The accomplishment of that end will be coincident with the destruction of our present system of government.

CONCLUSION

The comments here offered have been written in the hope of bringing about a clearer understanding of the purposes and probable effects of the Sheppard-Towner Act. The subject has been approached from the standpoint of public health administration and from the standpoint of government. The physician is no less a citizen because he is a physician, and it is conceived that he is interested in the act and entitled to speak concerning it from both standpoints. If what has been said leads to the conclusion that the life of the act should not be prolonged or that the act should be now repealed, that conclusion should be made known to the senators and representatives who represent in Congress the readers of these comments.

[To Be Continued]

MISS MARTHA FULTON DIES IN AUTO MISHAP

The Associated Press, under date of August 24, carried the following news story:

"Miss Martha Fulton, 16 years old, daughter of Doctor and Mrs. W. S. Fulton of Wheeling, died in the Greenbrier Valley hospital at Ronceverte at 10 o'clock today as a result of injuries suffered Sunday night when she was thrown from a motor conveyance while attending a girls' camp on the Greenbrier river.

"Miss Fulton was the granddaughter of the late Mrs. A. J. Clark of Wheeling, who at her death was probably the wealthiest woman in the state. Miss Fulton's father is a surgeon of national repute. A little more than a year ago her brother, Clark Fulton, was killed near Washington, Pa., when an automobile in which he and Thomas Bloch were riding went over an embankment as they were en route home from a country club dance at Brownsville, Pa."

Miss Fulton's father is president of the Wheeling Clinic and one of the most widely known members of the state association.

MEETING CALLED

The Upshur County Medical society will hold a meeting September 4 in Buckhannon at which time the feasibility of uniting with a neighboring county society will be discussed, according to an announcement received by Dr. L. W. Deeds, secretary.

The West Virginia Medical Journal

Directed and Edited by the Committee on Publication

[The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible]

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS:

WALTER E. VEST, Huntington — HARRY M. HALL, Wheeling — J. HOWARD ANDERSON, Marytown — C. W. WADDELL, Fairmont

MR. S. O. NEALE, *Secretary-Business Manager*, Charleston

Entered as Second Class Matter, January 1, 1926, at the Postoffice at Charleston, West Virginia

Volume XXII OCTOBER : 1926 *Number 10*

THE DIAGNOSIS AND TREATMENT OF URINARY STASIS *

By ALBERT E. GOLDSTEIN, M. D., F. A. C. S.
Baltimore, Md.

URINARY STASIS or the partial or complete blockage to the outflow of urine is no longer considered a rare entity, but on the contrary a common condition. Undoubtedly, the lesion has always been a rather common one but infrequently diagnosed. It may occur either in the upper or lower urinary tract, but is always due to some form of obstruction, whether it be extra-urinary or within the urinary tract itself. The discussion in this paper is confined principally to urinary stasis in the upper urinary tract, *i. e.*, ureter and kidney.

When the condition presents itself it is not labeled, therefore, any physician practising medicine may be confronted with it, irrespective of whether he is a specalist or not, or what the specialty he may be following. Frequently the lesions give rise to early symptoms which are of the back pressure type and unless recognized early, serious complications may result. The condition may be unilateral or bilateral. True enough, a large percentage of the bilateral cases are caused by some obstruction in the urethra or at the bladder neck and frequently in the bladder itself; nevertheless, one should never overlook the possibility of a bilateral ureteral stone or stricture, which will always give bilateral urinary stasis in the ureter or kidney.

The unilateral cases are by far the most common and may be the result or caused by a variety of lesions, amongst which are calculi, strictures and tumors of the ureter and renal pelvis, with due consideration given to

* Read before the fifty-ninth annual meeting of the West Virginia State Medical Association at Morgantown, May 27, 1926.

stasis in the upper urinary tract caused by such conditions as pregnancy, uterine tumors, ovarian cysts, kinked ureters, ptosed kidneys and many other extrinsic lesions which cause pressure from without.

In view of the fact that in most instances the cases are seen late, they frequently present a picture of the more chronic type, therefore, the degree of stasis will depend a great deal upon the acuteness or chronicity of the condition.

With the above facts in mind one should never be contented with the mere diagnosis of a ureteral stone or kink, or the fact that the patient is having some renal pain from pressure of a foetus, etc. The procedure should be carried a step further and a careful study made of possible damages that may have been inflicted upon the urinary tract by existing or preexisting conditions. This damage when present is usually in the form of urinary back pressure which is termed here urinary stasis. Urine at best is dirty, being one of the waste products of the body, therefore if allowed to remain in any portion of the urinary tract for a longer period of time than it normally should, acts as a good culture media for organisms which are the forerunners of infection.

Goldstein[1] demonstrated that the normal ureter, renal pelvis and calyces should empty itself of a 13.5 per cent solution of sodium iodide in from 3 to 8 minutes. The author[2] likewise demonstrated that the pathological ureter and renal pelvis retained the above-named solution anywhere from 8 to 240 minutes, showing conclusively, that if the opaque solution cannot be expelled properly, then the urine likewise is not expelled in its due time, giving sufficient reason for the individual patient to have symptoms resulting from urinary back pressure or stasis.

The diagnosis is no longer a procedure of guess work but one of accuracy providing the technique is carefully carried out.

Technique for Diagnosis of Urinary Stasis

In the past year some experimental work has been carried out for even a better technique than the one to be described here, but, inasmuch as this work is not complete the method that is to be described is one that has not failed; nevertheless, is a revision of the original.

A roentogram of the urinary tract is taken to note any radiable pathology. A cystoscopic examination is made and an opaque ureteral catheter passed up the suspected ureter to the renal pelvis. The cystoscope is removed. The urine is drained off and then the pelvic capacity is determined with sterile water. This is a very important part of the procedure. After the water is drained off, a film is taken with the catheter in place. The catheter should then be partly removed so that the tip remains about 4 to 5 cm from the ureteral orifice. The distance necessary to remove the catheter can be measured approximately on the first film. With the catheter in its new position, a 13.5 per cent solution of sodium iodide is now injected very slowly with a graduated syringe, injecting 2cc less than the determined capacity. The catheter is next removed and the second film taken. The patient is placed in a sitting posture principally for drainage and a third film taken 8 minutes after the second. If any solution is seen on this plate then the patient can be considered to have a stasis of urine in the ureter or kidney, wherever it may be seen. The amount of stasis present depends upon the length of time it takes the kidney pelvis and ureter to expel the solution, therefore further films can be taken after varying intervals. The length of time the opaque solution will remain in the kidney or ureter will depend a great deal upon (1) the presence or absence of an obstruction, (2) the acuteness or chronicity of the conditions and (3) whether the condition had been treated or not.

Treatment—In view of the fact that urinary stasis as mentioned is always due to some obstruction either of an extrinsic or intrinsic nature, the principal object should be first to remove the obstruction irrespective of its nature. After this has been accomplished various procedures are necessary, again dependent on the acuteness or chronicity of the condition. Where urinary stasis is present, there is frequently an infection so that lavaging the ureter and renal pelvis gives a great deal of satisfaction. Fre-

quently, this is best accomplished by allowing a ureteral catheter to remain in the ureter from two to four days and lavaging every four hours with some antiseptic solution. It is not infrequent that the tonicity of the ureter is decreased so that permanent ureteral catheters with lavage is beneficial in producing a return of its tonicity. Good drainage is absolutely essential where necessary, depending on the type of obstruction, therefore dilatation of the ureter should be carried out.

The function of these kidneys should be always determined and it is surprising to see how under treatment there is an improvement in the function and a reduction of the degree of stasis. This reduction is best studied by the ureteropyelogram, comparing the time that it took the kidney and ureter to empty itself of the opaque solution on the first examination with the time that it takes to empty itself after treatment. Of course where the function of the kidney has been so greatly reduced and the kidney tissue very much destroyed, so that under treatment there there is no improvement, then the condition of stasis of urine has been going on too long for palliative measures and in many instances it will be advisable to remove the kidney and frequently the entire ureter. Where it has been determined that there is a marked stasis of urine in the ureter and kidney causing marked destruction of the kidney, the organ should be removed. It is also essential to remove the ureter in these cases otherwise the reflux of bladder urine will pass up the ureter after the kidney is removed and act as a focus of infection.

Citation of Cases

For illustrative purposes, a few cases shall be cited in brief:

CASE *I*. No stasis—Normal. Example. White male, age 28. Admitted for observation. Indefinite pain in right back. Roentogram of urinary tract negative. Cystoscopy and ureteral catheterization—normal findings. Capacity 6cc. Uretero-pyelograms—normal pelvis, calyces and ureter. Seven and ten minute films show complete emptying of solution.

CASE II. Marked urinary stasis, right ureteral stricture and hydronephrosis. White male, age 29, admitted for colicky pain in right lumbar region. Urine contained few pus cells. Roentogram of urinary tract was negative. Cystoscopy revealed a normal bladder. A No. 9 wax bulb obstructed at a point 12cm up right ureter. Urine from right kidney contained a few p.c. and had specific gravity of 1002. Capacity more than 175cc. Intravenous pthalein excretion 12 per cent from the left and 7 per cent from the right kidney in one-half hour. Uretero-pyelograms on the right revealed tremendous hydronephrosis, markedly dilated ureter for 20cm beginning at a point about 12cm up, where a definite stricture was present. Seven minute film demonstrated complete retention. One and two hour films revealed marked retention, demonstrating a marked urinary stasis. Ureteral dilatation, lavage and permanent catheter drainage for 3 days at a time improved condition and the function of the kidney.

CASE III. Marked stasis, left ureteral calculus, ureteral stricture, hydroureter and hydronephrosis.

White male, age 52, admitted for renal colic. Urine turbid, containing a few pus cells. Roentogram revealed a shadow in the lower left ureter. Cystoscopy revealed normal bladder. A No. 6 catheter passed up left ureter and became obstructed immediately behind the ureteral orifice. This was overcome and then became obstructed 11cm up. Catheter passed by this obstruction at a subsequent cystoscopy. Urine from left kidney contained many p.c. Intravenous pthalein revealed 25 per cent from right kidney and 1 per cent from the left in one-half hour. Ureteropyelograms evidenced a markedly dilated pelvis, calyces and ureter. A three and one-half hour film revealed marked retention of solution. After several dilatations, a calculus was passed. Ureteropyelograms made one month after the passage of the stone and these showed that the pelvis, calyces and ureter had contracted considerably since relief of obstruction. Definite stricture about 11cm up on the left. A 45-minute film showed evidence of stasis, in that a fair picture is still obtained but when compared to

the one that was taken a year after the passage of the stone when the dilatation of the ureter was present, it is observed that the ureteropyelogram is practically normal and that a 45-minute film taken at this time shows practically no evidence of any solution. Pthalein at present gives an output of 25 per cent from the right kidney and 6 per cent from the left kidney in one-half hour after intravenous injection. At present, patient is in excellent condition.

COMMENT

The procedure of diagnosis as described has been carried out in sixty cases and has always been found of tremendous value. Sufficient stress cannot be made on the importance of diagnosing the condition. Frequently an indefinite abdominal tenderness, attacks of nausea or vomiting, sometimes chills that cannot be accounted for, can be caused by urinary stasis. A negative roentogram does not signify the absence of pathology. Hydronephrosis is frequently spoken of and treated but no consideration given to the length of time that urine remains stagnant in the kidney and ureter in these conditions. The introduction of a ureteral catheter removing the retained urine is insufficient. The important factor is to determine the length of time it takes the retained urine to be expelled without a catheter in the ureter and renal pelvis.

CONCLUSIONS

1. That in obstructions to the outflow of urine from the kidney or ureter, the expelling time is always delayed.

2. The amount of stasis present can be determined by noting the expelling time of an opaque solution.

3. That if there is a delay in its expelling time, removal of the obstruction and better drainage should be established.

REFERENCES

1. Goldstein, A. E.—"A Scientific Study of the Normal Human Ureter by Fractional Ureteropyelography," Jour. of Urology, Vol. VI, No. 2, pp. 125-132. August, 1921.

2. Goldstein, A. E.—"A Study of Urinary Stasis in Ureteral Obstructions," Jour. of Urology, Vol. XIV., No. 1, pp. 33-45. July, 1925.

DISCUSSION

DR. R. A. BOBBITT, Huntington:

I am indeed sorry that more of our folks are not here to hear Dr. Goldstein's paper. One of the nice things about this work is that it is original. I have followed Dr. Goldstein's work for some years. In fact, when I first took up urology, about thirteen years ago, I was in general surgery; and he is the man who made me enthusiastic about urology and led me to take it up. The interesting thing about his paper this afternoon is that it brings to us something absolutely new. We have been interested in urinary stasis from different standpoints for a long time, but this work of his has given us a definite way in which the amount of stasis can be measured; and I think we, as urologists and as doctors as a whole, are indebted to him for his work.

Three or four points particularly interest me. We are taught we must have definite symptoms of the urinary tract before it should be investigated. My experience in the last few years has taught me that is not true and that definite pathology may exist without symptoms. Dr. Goldstein's work brings out that many of these cases have absolutely normal urine. We have been inclined, where we find negative urine, to say there is nothing wrong.

Another thing that interests me is how a kidney can come back. I have had a case in which the kidney was completely blocked for seven days, and in which, after the stone was removed, it returned almost to normal.

Another interesting point is that a patient may have a definite reaction with chills and fever, with absolutely clear urine, due to stasis.

DR. G. G. IRWIN, Charleston:

From the standpoint of the general practitioner there are many interesting points in Dr. Goldstein's paper. First of all, Dr. Goldstein has given us a new function test. This is supposed to be the age of physiological surgery, the doctor is not concerned so much with anatomy as with physiology; he is supposed to leave a physiologically functioning organ.

Cases of pyelitis of pregnancy can be catheterized at any stage of the pregnancy

without fear of abortion. These cases, if caught early enough and treated persistently enough, can be carried through to a normal term.

So far as infected urine is concerned, our experience in Charleston does not quite parallel Dr. Goldstein's. In cases such as these we do see infection of the urine. Last year at Bluefield the point was brought out, in talking about ureteral stricture, that many of these cases do have normal urine.

DR. T. JUD MCBEE, Morgantown:

We know that pregnancy is a physiological condition. Why, then, do women say that they do not want to have any more children because, when they become pregnant, after the first three months they never see a well day? Now I do not know whether many of those conditions are due to stasis or some other condition of the urinary tract, and we shall not know until we use the cystoscope and have a ureterogram and pyelogram. I think those women should be cystoscoped.

We also see many men and women in delicate physical condition who perhaps have this condition. I had a case that was diagnosed at the Brady Urological Institute in Baltimore as having urinary calculi of right side with resulting urinary stasis. Without an operation he returned home where, in the face of the diagnosis he was advised to have his appendix removed which was done. He still has his pathology and recurrent attacks of pain.

Dr. Goldstein spoke of a case with urticaria in which that was the only symptom. I happened to be on that case, too, and I believe Dr. Goldstein overlooked one symptom. This boy had had hemorrhage and marked anemia.

This work of Dr. Goldstein's in establishing the emptying time of the normal pelvis is original with him. I should like to hear from some of the general surgeons and the general medical men as to whether they believe in these conditions after hearing this paper and seeing these pictures. For my part, I have nothing to say except in confirmation of what Dr. Goldstein has brought you.

DR. J. W. GILMORE, Wheeling:

The point Dr. Goldstein mentioned about a surgical kidney (i.e., a tuberculous kidney) being removed and the ureter left I think should be emphasized, because in dealing with tuberculosis where it is localized it is like dealing with a copperhead or rattlesnake—you deal it a killing blow and it is dead. I had one experience in which the kidney was removed. Later the man died. We did an autopsy and felt, from the results, that if the ureter had been removed when the kidney was removed that man would have been living at the present time. He was a very valuable citizen, too. I do feel that in a tuberculous kidney the kidney should be removed down to the bladder opening and in that way eliminate the possibility of disseminated tuberculosis.

DR. GOLDSTEIN, closing the discussion:

I might say that some important points were left out in the reading of the paper, but were mentioned in the paper. One point I brought out and that I want to impress is that ureteral stasis can be visualized. There is such a thing as visible stasis. The old way of passing a catheter in the ureter and, from the way the urine drops, to say the patient probably has or has not a hydronephrosis should not be tolerated.

There is no question but that ureteral stricture has been talked about all over the country. Some are getting on the band wagon; some are not. I believe, however, that it has been carried too far in the hands of some individuals. This idea of diagnosing ureteral stricture by the wax bulb is *fine, but not final.* I got the idea of diagnosing stricture by the uretero pyelogram. Dr. Hunner gladly accepted this together with the bulb method, and we went a little further. Still, some individuals claim that we have no such thing as ureteral stricture. Then, by retention tests carried out some years ago, I claimed that a normal pelvis and ureter should empty within a certain time (3 to 8 minutes), and if it does not empty then, that there is some obstruction and retention. That has been definitely proved. I can take every case of ureteral obstruction, whether it be due to stone or stricture or

large ovarian cyst or rectal tumor, and can demonstrate an increase in the retention time. While it should not be absolutely depended upon, yet it is a very valuable aid and should be used.

As to pregnancy cases, in the institutions with which I am connected, when a woman comes in pregnant and has a large mass in the abdomen besides the foetus, that is diagnosed as a kidney condition, we no longer demand that an abortion be performed or to have the foetus expelled. We always place ureteral catheters into the pelvis and allow the woman to run her term. We pass the catheters into the kidney and allow them to remain in and allow the child to remain in its place until the time of birth. It has never failed to work in any case if an accompanying renal condition is present.

The remarks Dr. Irwin made are very timely. One thing we can do by injecting the ureter and the pelvis in these cases; we can bring out the presenting symptom. They complain of pain or of a dragging sensation. When you inject the solution you reproduce the symptom every time.

I might say one thing in reply to Dr. McBee's discussion, and that is, that this is not a propaganda paper by any means. I did not read it for the purpose of inviting the general medical man or the general surgeon to get into an argument with the urologist. I wanted to bring out the fact that many people are operated upon and leave the hospital minus the appendix or gall-bladder or, in many cases, an ovary when such operations are absolutely unwarranted.

I am glad that Dr. Gilmore agrees with me that in such types of infection as tuberculous kidney the ureter as much as possible should be removed, to prevent disseminated tuberculosis. The chances are that it started from the urine in the case mentioned, though possibly the patient had pulmonary tuberculosis.

Question: Please give us the differential diagnosis of gall-stones from stricture of the ureter.

A: The type of radiation of pain, plus stereoscopic uretero-pyelograms. In the gall-bladder case we usually find radiation of pain from the lumbar region upward. In ureteral and renal conditions we find the pain, either dull or sharp, radiating or localized, in the lumbar region and radiating forward and downward. We can not depend upon the examination of urine, for the urine may be absolutely negative. From the standpoint of X-ray examination, you may have on a plain plate a shadow; and there may be a question as to whether it is a kidney stone or a gall stone. Fortunately, today we make use of the visualization test in gall bladder cases. When we have obstruction of the gall-bladder, the solution that is used for this purpose will not enter the gall-bladder. At the present time, if shadows in the gall-bladder are confused with neral shadows, we make use of stereoscopic plates. If you have a shadow in the region of the gall-bladder that you think may be a kidney stone and are not sure of your reading, then by cystoscoping that individual and taking stereoscopic plates at the same time you can determine the depth and distance of the shadows, whether anterior, posterior, superior or inferior to the kidney. Stereoscopic plates are a valuable aid in determining whether shadows are renal shadows or gall-stone shadows. I had one case recently in which the patient had typical kidney colic. We got large shadows in the region of the gall-bladder. I cystoscoped him and got a definite scratch on the wax bulb. Then I took a stereoscopic uretero-pyelogram and got plates which showed definitely that there were gall-stones. The shadows were anterior to the kidney. He also had a stone in the ureter. We dilated the ureter and removed the stone. He is still having trouble with the gall-bladder and will probably have the stones removed by operation.

TREATMENT OF TOXEMIA

Drs. Lyle G. McNeile and John Vruwink, of Los Angeles, Cal., state that a ten per cent solution of recrystallized magnesium sulphate, in doses of ten to twenty-five c.c., given intravenously, is a valuable adjunct in the prevention and care of eclampsia. It is the authors' experience that it also decreases the congestion and swelling of the kidney and aids in elimination. A series of cases so treated at the Los Angeles General hospital have given better results than all previous methods of management. (*Medical Journal and Record*, April 1926, p. 523.)

CONSIDERATION OF EARLY OPERATION IN DISEASES OF THE BILIARY TRACT *

By C. A. GROOMES, M. D.
Elkins, W. Va.

IN DISCUSSING the question of early operation in disease of the Biliary Tract, it will be necessary to summarize certain facts relating to the cause and usual manifestations of the disease, as well as the available diagnostic and therapeutic measues. But in the time at my disposal, it will be impossible to discuss any of these in great detail or to take up the anatomy, physiology and pathological physiology of the biliary tract.

The primary cause is now generally regarded as an infection with micro-organisms, which reach the gall-bladder by way of the blood or the bile, or through the common duct from the bowel. It has been stated more recently, however, that certain changes in the blood constituents antedate the infections and prepare the way for them by disturbing liver function and lowering resistance. It is also generally understood that stasis of bile in the gall-bladder is an important factor.

After infection has occurred inflammatory products, such as mucus, desquamated epithelial cells and leucocytes, become mixed with the bile making it thicker and more viscid. Cholesterin being in excess under these abnormal conditions, concretions frequently are formed. Cancer of the gall-bladder or ducts is usually the result of, or at least sequel of, chronic cholecystitis, and practically always develops at the site of an imbedded calculus.

The type of disease seen most frequently is a chronic or sub-acute catarrhal cholecystitis, with exacerbations recurring at intervals. During the period between exacerbations there may be no symptoms or only reflex ones referred to the stomach. During the acute attack there comes suddenly pain and tenderness in the region of the gall-bladder, fever, vomiting and possibly jaundice. If there be obstruction of the cystic duct due to inflammatory swelling or stone, mucus accumulates gradually distending the gall-bladder. If the inflammatory process extends to the peritoneal surface, a peri-cholecystitis results, with adhesions of the gall-bladder to the surrounding organs, chiefly the duodenum, pylorus, and hepatic flexure of the colon. If there be present a virulent infection, all symptoms are accentuated, the exudate becomes purulent, and we have a condition comparable to suppurative appendicitis, with its possibility of perforation and resulting peritonitis. If a stone has reached the common duct, the symptoms are usully increased and vary according to whether the obstruction be partial or complete. The fact that jaundice is not present does not necessarily mean that there is no obstruction of the common duct. There may be temporary obstruction lasting only long enough to cause severe pain, but relieved before jaundice has had time to develop. Experiments with dogs have shown that jaundice will not appear for at least twelve hours, sometimes three or four days, after the common duct is completely obstructed. During this period the bile is concentrated in the gall-bladder.

Doctor W. F. Cheney has given a classification which covers the various types of cases quite thoroughly. He has placed them in five groups: Group 1: those having recurring attacks of biliary colic with good health between. Group 2: those in whom stomach symptoms play a prominent part, indigestion being more or less constant, but with attacks of colic still appearing. Group 3: stomach symptoms predominating the picture, the colic having disappeared and other symptoms

* Read in the Section on Surgery the fifty-ninth annual meeting of the West Virginia State Medical Association, Morgantown, May 26, 1926.

relative to the gall-bladder having almost quieted down. Group 4: cases in which there are no symptoms for months or years, except those produced by the stomach, the gall-bladder calling no attention directly to itself—this likely precalculous stage. Group 5: where the gall-bladder contains stones, but gives rise to no symptoms of any kind till a sudden attack of pain occurs, or possibly recognized only at operation for some other condition.

Because such cases as those in the two latter groups exist, all cases which give a past history of any disturbance which might be a possible etiological factor, such as, typhoid fever, attacks of pain or distress in the right lower quadrant of the abdomen, dyspeptic symptoms, recurring tonsilitis, sinusitis, apical abscesses, etc., should be studied carefully with gall tract disease in mind. Those giving a history of catarrhal jaundice, or showing a brownish pigment of the skin or multiple telangiomas, may be cases with mild cholecystitis in which a diagnosis might be made if we searched carefully for it.

In the far advanced cases giving a fairly definite history the diagnosis usually is easy, in most cases being determined by the history and physical examinations alone, but in dealing with those having severe pain in the upper abdomen, one should always keep in mind the possibility of a cardiac attack, coronary obstruction or aortitis. It is in the mild and obscure cases where other methods of diagnosis are required.

Fluoroscopic and roentgenographic findings are not always reliable, but in the majority of cases are helpful. In interpreting these, it must be remembered, however, that some of the findings supposed to be indicative of peri-cholecystitis may be the result of a localized peritonitis due to disease in the pylorus, duodenum, or colon, rather than disease in the gall-bladder. The negative findings, such as no duodenal defect, no cecal or appendiceal stasis, and no break in the continuity of the ascending or transverse colon, are of considerable value in that they eliminate these organs as the possible source of trouble, thereby increasing the evidence in favor of gall-bladder disease. But this evidence, of course, must be combined with that obtained from the history, physical examination and the usual laboratory tests in making a diagnosis.

The later methods of visualizing the gall-bladder by means of various opaque compounds injected intravenously or given by mouth mark a great advance. E. A. Graham and his associates have reported correct diagnoses in 95 per cent of cases of verified cholecystitis with and without stones. He states that the method has been quite accurate even in the early cases.

I was one of the early purchasers of the work published by Dr. Lyons on the non-surgical drainage of the gall tract and have practiced the method to a certain extent since that time. While I feel that direct examination of the bile according to his method is of considerable value as a diagnostic measure and will eventually be used much more than it is at present, yet, I am not convinced that non-surgical drainage as a therapeutic measure will supplant the accepted forms of surgery, even in the early cases. If, by any method, we are able to diagnose cases earlier than has been possible previously, it seems to me much better to remove the cause early, surgically, rather than delay, hoping that the disease process will be checked or eradicated by non-surgical drainage, and, in the end, have to deal with the case in a more advanced state the same as would have been the case had the early diagnosis not been made. However, time and a sufficient number of cases properly controlled will prove or disprove the value of the method. If proved beyond question that the early cases can be cured by this method, it undoubtedly will be accepted and practiced in the particular cases to which it is suited. If the preoperative and postoperative use of this method proves as useful as the present claims would indicate, in lessening the operative risk and making less frequent the postoperative complications and recurrent operations it will be of distinct advantage.

In spite of the great progress which has been made, from the first recognition of gall-bladder diseases down to the present time, in the study of these cases from the physiological, pathological, and diagnostic standpoint, and in the technique of operation, which has

been improved wonderfully in recent years, the results of surgical treatment on the whole are not as good as they should be. While mortality has gradually lessened it still is too high and the severer complications, such as cirrhosis of the liver, pancreatitis, perforation with resulting peritonitis, fistulas and cancer, are of too frequent occurrence, and multiple operations too numerous. The reason seems to be, chiefly, that too many of the cases are coming to operation too late. The infection has progressed to such an extent that even if the gall-bladder be removed a cure is not effected because of the residual infection in the ducts and liver and because of the co-existence of the more serious complications. In 1,000 cases analyzed by Smithies the mortality was 6 per cent. Thirty-five per cent had more or less serious pathological lesions other than cholecystitis and calculi.

The tardiness of patients coming to operation may be accounted for in many ways:

1. Patients with vague symptoms, and in some instances severe symptoms, do not seek medical advice of any sort till the trouble is far advanced. Patients whose cases have been diagnosed correctly and the proper advice given, refuse operation in the early, or comparatively early stages, hoping that the condition may be relieved by various forms of medical treatment. The laity has not yet come to consider pain in the upper right quadrant of the abdomen as seriously as it does pain at McBurney's point.

2. Many cases are incorrectly diagnosed as "biliousness," "indigestion," "dyspepsia," "neurasthenia," etc., by medical advisors (as well as surgeons) who have not investigated their cases sufficiently, either through lack of knowledge and ability to make a correct diagnosis, lack of the proper facilities, lack of time (as is frequently the case with the busy general practitioner), or through absolute carelessness. It has occurred to me that a more descriptive name for many of the cases commonly called "hypochondriacs" would be "right hypochondriacs," thus calling attention directly to that portion of the anatomy which, in many of them, contains the pathological lesion.

3. Many cases in which a correct diagnosis has been made by the medical attendants are, for one reason or another, not advised to have surgical treatment sufficiently early. Too often is the physician content with saying "the stone has passed," and the patient rejoices, looking to the future with the hope that this might be the last attack, and is comforted by the fact that if there is a recurrence, it may not be for months or even years.

4. In some cases after a thorough and complete investigation with all available means, it is impossible to arrive at a definite diagnosis, or even to convince oneself that, in spite of all negative findings, the case is a surgical one and should be given the advantage of a visual examination of the abdominal cavity. I am not advising exploratory operation as a short cut to diagnosis in chronic cases, but I do believe that it will disclose the pathology and permit of corrective measures in many cases which have "run the gauntlet" of all diagnostic methods with negative findings, but in which there is a suggestive history.

I do not wish to give the impression that I place accuracy in diagnosis above all else. In the acute abdominal case which appears to be urgent, where a positive diagnosis cannot be made quickly, it is far better to operate at once than delay for days, or even a few hours, thereby, causing the patient to pay for a diagnosis with his life.

In stressing the value of early operation I want to emphasize the importance of applying this rule to cases which have had a previous operation. Delay in draining a common duct completely obstructed by stone, scar tissue or inflammatory swelling, at any time subsequent to cholecystectomy, or failure to give the proper surgical attention to a case which has had a previous cholecystostomy, is much more dangerous than delay before the primary operation.

Finally, I can express my thoughts concerning gall tract disease briefly in no better way than by quoting the words of an abler writer: "It is better to throttle it in its infancy rather than in the old age of its life cycle."

[NOTE—The discussions will be found at the end of the following paper.—ED.]

CHOLECYSTECTOMY vs. CHOLECYSTOTOMY

By H. C. POWELL, M. D.
Morgantown, W .Va.

THE REAL INTEREST in surgery of the gall-bladder and bile passages date from 1882, on the observations of Langenbauch. Studies in the laboratory and observations at the operating table have given us very fruitful knowledge since that time. After the first rush of enthusiasm, which greets every new idea, comes the cold judgment of the innovation with more facts at hand on which to base opinions, and the surgery of the gall bladder has been no exception to this rule.

In considering the surgical aspect of this subject three questions present themselves for answer. *First*, the indications for surgery in cholecystic diseases; *second*, the type of operation; *third*, the end results. As in any other subject dealing with diseases, the question of pathology is of prime importance. There is little difference of opinion today that it is not the gall stones, but the inflammatory processes produced by the calculi that determines the gravity of gall stone diseases. The severe pain is caused by an inflammatory process produced by the stone except in case of actual obstruction of the common duct. This merely shows that acute and recurrent attacks of gall stone colic, are due to acute and recurrent cholecystitis, cholangitis, subacute pancreatitis or all of them.

Gall bladder may be arranged in a series to show every stage and type of infectous inflammation, enlargement, acute and chronic exudates, infiltrates, and fibrous adhesions to neighboring organs. With each repeated attack there is another change added to the already altered structure of the gall-bladder, in the thickening of its walls, in the form of ulcers, or cicatricial contractions and so on; each repeated attack adds to the damage already done.

Classification

Clinically, gall bladders may be classified in a number of ways, but a simple way is to divide them; *first*, into those that have had a single attack which never recurs or in which recurrence does not take place for a number of years; *second*, cases of persistent infection. Recurrence, when it does occur in the first type, is evidently the result of a new infection, and these cases may or may not subsequently fall in with the second or larger group of persistent infection of the gall bladder, in which attacks will be increased in severity and frequency until, eventually, operative relief is demanded.

It is the consensus of opinion, which has been maintained for a number of years, that it is not advisable to operate on the first mentioned class of cases, but as soon as a case falls into the second group, it belongs to a class in which surgery is indicated.

It is now well understood that when a diagnosis is established, the earlier the surgery is undertaken, the greater are the chances for cure and permanent relief from symptoms.

Functions of the Gall Bladder

What function does the gall bladder have besides being a receptacle for bile? It is definitely known that the liver secretes bile more or less continuously, but at a varying rate; it is known that bile does not flow continuously into the alimentary canal, but only when digestive demands are made on it. It is now known that the gall bladder is a receptacle for bile, and adds mucus to it. Does it add anything else? The gall bladder concentrates its bile by removing at least what amounts to a normal saline solution. Does it remove anything else?

* Read in the Section on Surgery, fifty-ninth annual meeting, West Virginia State Medical Association, Morgantown, May 26, 1926.

Calculi

It must be borne in mind that, in nearly all instances, calculi originates in the gall bladder, and the stones or particles of stones found in the ducts are particles of actual stone that have escaped from the gall bladder. Prophylaxis of stone in the common duct is possible by the early removal of stone from the gall bladder.

Routes of Infection

As to the routes of infection, the possibilities are through the blood stream, by way of the cystic artery, up from the duodenum by the common and cystic duct; from the intestines through the portal vein, through the liver, and down by the way of the hepatic duct, and through the lymphatics. It makes no difference by what route the infection to the gall bladder may come, when once infected a gall bladder may continually reinfect itself and spread infection to neighboring organs. Bacteria are present in bile, and stasis from one cause or another follows proliferation. The mucosa of the gall bladder is invaded; bacteria enter the lymphatics; spread into the liver, by which they may be excreted, and then again re-enter the gall bladder and so on in a vicious circle. When we remove the gall bladder, therefore, we break into the center of the vicious circle, and thus it is demolished.

It has been a question of discussion for a number of years, whether in all cases requiring surgery of the gall bladder, it is not better to remove the gall bladder than to drain.

The conservative side has maintained that a gall bladder showing no marked pathology in its structure should be preserved, as it no doubt has some very important function to perform, and when stones were removed and ample drainage established, the gall bladder would recover and function as before. It is now a question in the minds of many if the gall bladder ever regains its normal functioning power, even from a simple drainage.

It is claimed for cholecystotomy, that if you cannot drain the gall bladder and smaller ducts through the common duct, how can the smaller ducts be drained if you remove the gall bladder? Those who advocate cholecystectomy claim that an infected gall bladder is a constant source of infection to the bile passages, and if this source of infection is removed, the continual flow of bile through the ducts will afford ample drainage to clear up the infection of the bile passages.

The larger clinics show that over 80 per cent of all gall bladder cases returning for re-operation have their gall bladders. It is reasonable to suppose that where the bile is stored and concentrated, infection would have a better chance to occur. Gall stone formation takes place almost entirely in the gall bladder; by removal you practically eliminate that source of trouble.

The removal of stones and drainage does not mean that they will not occur again. It has been demonstrated that stones have reformed in a period of six weeks following drainage and the time may have been much less than when formation began.

In the larger clinics and with experienced surgeons the relative risk of cholecystectomy and cholecystotomy do not play a part in the discussions. In fact cholecystotomy is followed by a higher immediate mortality, the reason for this being that drainage is done in the more desperate cases. In cases with extensive adhesions or debilitated condition of patient or intense icterus, drainage may be considered the more conservative method; the reasons for this are less shock and shorter operative time.

Adhesions following operative procedure on the gall bladder are no doubt more extensive in cholecystotomy than in cholecystectomy. If we arrange the cause of recurrence according to type of operation performed cholecystotomy certainly would not be the operation of choice. Recurrence of symptoms after cholecystectomy would be due to imperfect operation in a certain percentage of cases; *i.e.* failure to remove a stone in the duct at time of operation, operative traumatism and the like.

The most important sequelae in cholecystotomy are, stone in the common duct and pancreatitis; the latter by extension from the interstitial cholecystitis. Deaver believes that pancreatitis is the result very frequently of lymphatic-borne infection from the gall bladder, and that removal of the gall bladder removes the source of infection. He states that, so persistent are the effects of prolonged

chronic cholecystitis that pancreatic disease is often already established at the primary operation. Pancreatitis is more or less a cause of recurrence of symptoms after a cholecystectomy.

Conclusions

Cholecystectomy is as safe as cholecystotomy in experienced hands. The immediate mortality is greater after cholecystotomy. It is doubtful if a gall bladder once infected or drained, ever regains its normal functioning power. Removal breaks up a cycle of infection, and furnishes prophylaxis against stone formation and stones in the common duct, pancreatitis, adhesions, cicatricial contractions and infections to neighboring organs. Eighty per cent of re-operative cases still have their gall bladders. The patient does not miss an organ which has been functionless, or in which function has been greatly impaired for sometime before operation. The chances for recovery or cure are greater following cholecystectomy, recurrences being less frequent and usually less serious than after cholecystotomy.

REFERENCE

Deaver—Journal, A. M. A., June 28, 1924.

DISCUSSION

DR. WILLIAM R. GOFF, of Parkersburg:

Mr. Chairman, and members of the Surgical Section: There are two points that I wish to consider. First I find that malignancy of the gall bladder occurs and diagnosis is not made until the patient is practically inoperable. There is sufficient reason in a case of impacted stone for the person to have a surgical removal. That is about the only type of case of cancer of the gall bladder that is curable. Occasionally we find that the side of the stone where impaction occurs is where malignancy is found. Also diagnostic methods. There is one thing I would like to mention, and that is that bile occurs in the plasma. This idea was brought about by Blankenhorn, Hoover and other investigators who found that shortly after an attack of colic, between six and twelve hours afterwards, that bile does occur in the plasma, providing there is still pressure on the walls of the gall bladder and slight obstruction of the cystic duct. It is only apparent in conjunction with the other methods of gall bladder disease, and visualized by means of X-ray. This method is well established by Graham and his workers. It does not give, however, a great deal more evidence of this condition than does the method of Lyons except for the interpretation, and the interpretation is a little vague in some ways the same as is the Lyons method. There is just one other point and it is the management of the typical jaundiced patient. We all know that an acute onset of jaundice accompanied by no pain usually means catarrhal jaundice, but occasionally we have a badly jaundiced patient without pain that has a stone. In this instance, of course, the other tests are of little value unless the X-ray will show the stone. Whether it is a good therapeutic measuse to use magnesium sulphate is a question, but if the effect of catarrhal jaundice is well established there is no use of operation, and an operation, even in catarrhal jaundice, does justify the procedure. I agree, in the main, with Dr. Groomes in his paper.

DR. W. S. FULTON, Wheeling:

I am very sorry, Mr. Chairman, that I did not arrive in time to hear the first paper but was very much interested in Dr. Powell's paper. He covered the subject quite thoroughly and well. I suppose as long as we are doing gall bladder surgery the question as to proper procedure will be undecided as between cholecystectomy and cholecystotomy. It seems to me that in years to come we are going to look back upon gall bladder surgery as one of the dark spots in surgery. I do not believe there is any other abdominal pathology that we are handling as unsatisfactorily at the present time.

It seems to me there is more opportunity for original research work of this offending organ, particularly in the diagnosis and treatment of gall bladder disease. The technique of either cholecystectomy or cholecystotomy has been so well worked out that the average man serving his ordinary interneship in a general surgical hospital can perform the operation with comparative safety to the patient but the question at the operating table as to whether a gall bladder should be drained, removed, or let entirely

alone has not and, I am afraid, will not be settled until we know more the indications for surgery. I have seen so many men at the operating table, when they were operating upon a very thin subject and the gall bladder could be easily exposed, not hesitate at all to do a cholecystectomy. The same operator, and I am not sure that this is not applicable to all of us, when he is dealing with a short-chested deep abdomen where he cannot expose the liver well, is perfectly satisfied to drain. So that his course of procedure is not necessarily in line with well proven surgical principles, but rather a course determined by convenience and expediency. One point, I believe, is pretty thoroughly settled and that is that the gall bladder should never be removed if there has been any jaundice or other evidence of obstruction in the common duct. The gall bladder may subsequently be utilized to sidetrack the bile either to the stomach or to the duodenum.

The work done by Graham and Cole has been a very helpful addition in the diagnosis of these cases. However, at the present time there is nothing superior in diagnosis to a well taken and carefully recorded history. Of course, an X-ray demonstrates stones and is indisputable when positive but often stones are present when too soft to show shadows.

The rarity with which the patients ever die from acute cholecystitis when left alone should compel us not to advise operation in the acute stages which is notoriously dangerous.

DR. W. H. ST. CLAIR, Bluefield:

Mr. Chairman and fellow members of the Surgical Secton: Dr. Powell has covered the subject Cholecystectomy vs. Cholecystostomy very thoroughly, and he has given all the theoretical and practical reasons why the gall bladder should be removed. There is a field for cholecystostomy in the patients who are bad risks and will stand only the least amount of operative procedure. The decision whether to remove the gall bladder or not, I believe, should depend upon the experience of the individual operator. If an operator stumbles into a gall bladder case and he is not accustomed to doing cholecystectomy, I don't think he should feel he is going to be forever damned if he does the simpler operation which will be much safer for the patient, even if he should have a recurrence.

I know of no field in surgery that requires as much painstaking care as that of the biliary tract. As Dr. Fulton stated in his discussion, in a thin individual with a flabby abdomen the patient can easily be deprived of the gall bladder, but take a fat person with a fixed liver and friable gall bladder you are up against a very difficult proposition.

Any surgery presupposes an adequate incision which is doubly true in dealing with the gall bladder and its ducts. After the abdomen is opened there should be a thorough exploration. I think the common duct should be gone over both before and after removal of the gall bladder and if there is any queston, open and explore it. What may appear to be a brilliant operation may be entirely inadequate on account of overlooked stones in the common duct. Books on surgery beautifully illustrate the vermillion colored structure which represents the cystic artery but in ordinary practice it does not exist. After carefully isolating and bisecting the cystic duct tease the gall bladder end of it upward; two or three strands of tissue seem to interfere with its being pulled up, one of these strands is the cystic artery. This should be carefully ligated to prevent a sudden spill of blood and blind grappling for it with danger of injury to the hepatic or common duct.

In most cases the reason for cholecystectomy patients coming to second operation is some error in technique at the first operation. In the very difficult cases a subserous resection of the gall bladder is a life saving procedure.

Another point I wish to emphasize is that with a few exceptions gall bladder surgery is not an emergency procedure. Practically all of the cases will clear up if given time under proper conditions and become safe surgical risks. It behooves us to pay especial attention to the technic in gall bladder surgery and with an occasional exception not operate on the case when acute, allowing them to get over the acute attack and become good surgical risks.

DR. W. P. BONAR of Moundsville:

Mr. Chairman: I am very sorry Dr. Fulton did not hear the first paper, because he is a rather wide man in his work and I wanted him to talk on "X-ray of the Gall-Bladder," mentioned in the first paper. I consider gall bladder work as individual work, not so much the individual doing the work, as the individual gall-bladder being operated.

If a child gets burned he always remembers where he got burned. As Dr. Fulton has said, gall bladder work is one of the black spots in our work that we fear about the most of any operation we do.

The gall bladder which has been inflamed and of long standing with a lot of adhesions, we see when acute, and remove the gall bladder because of disease of the gall bladder itself. In these cases we find so much inflamed condition and adhesions that cholecystectomy would be very dangerous, because we know we can not always examine the ducts and the common duct may be occluded by a stone. I have in mind a case operated for cholecystotomy which was the only salvation of the patient, on account of a distended gall bladder, later a cholecystectomy was done, but no diagnosis of stone in the common duct, a few months later it became necessary for another operation and the duct was dissected down nearly to the intestine where a stone was found and removed and a probe passed into the intestine. The patient fully recovered but it was a serious operation.

The cases of cholecystotomy and cholecystectomy are, as I see them, individualised. We cannot say to remove all gall bladders nor say not remove any. One man may remove many gall bladders that another would leave, yet one man's success seems to be as great as the others. Indications govern the operations.

I have in mind a case who thirty years before his death had symptoms of indigestion and was jaundiced, which symptoms passed off, at the age of 83 he developed gall bladder trouble and on account of his age was not operated, but declined rapidly and died. After death a post mortem revealed a case of long-standing gall stones complicated with cancer.

We have many cases carrying gall stones without symptoms whom some doctor has seen years ago who diagnosed indigestion and liver trouble without calling it gall stones, the doctor having gone to his reward without leaving any history of his case and we discover the case later without any previous attacks.

We have been told to use X-ray for gall bladder trouble with the instructons that if gall stones are shown in the picture that it is positive and if they are not visible that we are not positive either way. But I had a patient who had his gall bladder X-rayed and the stones found but upon operation we found a healthy, stone free bladder, and a duodenal ulcer and was recovering. We let the ulcer alone and removed the appendix. The man recovered, and we decided the X-ray failed (lied).

DR. CHARLES A. GROOMES:

The discussion has been quite clear, and I think so much so that there is nothing I care to add to it except in regard to the statement regarding experience. In every article I have read on the advisablity of doing cholecystectomy or cholecystostomy, and every discussion I have heard where the question was brought up, it has brought to my mind the question of the operator's ability to remove the gall bladder. If he is not competent to do what is indicated, say a cholecystectomy, he certainly has no right to open the abdomen.

Nicholas Lukin advises that the appearance of a sharply localized murmur at the apex, sometimes but faintly transmitted, which is soft and mildly blowing in character, with a persistent temperature, no matter how slight, is sure evidence of a valvular involvement. The valve then may have the appearance like the sclera in a catarrhal infection or measles, which may in a like manner subside with sufficient rest and care. No great or permanent damage may result if recurrent infections can be prevented by the removal of infected foci. Protein therapy or autovaccination has often facilitated recovery. (*Archives of Pediatrics*, May, 1926, p. 319.)

COMPLICATIONS INCIDENT TO THE OPERATIVE TREATMENT OF THE INFLAMMATORY DISEASES OF THE GALL BLADDER *

By AIME PAUL HEINECK, M. D.
Chicago, Ill.

DURING the last ten years, great advances have been made in the diagnosis and operative treatment of diseases of the gall-bladder and bile-ducts. Further improvement evidently is possible in diagnostic precision, timeliness and completeness of operative relief and obviation of recurrences. The unflagging inculcation of established facts and the combined efforts of internists, surgeons and laboratory workers have given us a more detailed understanding of the etiology, symptomatology, anatomical evolution and therapeutic indications of the various pathological processes of the biliary tract. Cholecystitis, acute and chronic, and its manifold complications call for operative relief. In the early stages of the disease, surgical therapy judiciously applied, will cure 66 per cent and improve 34 per cent of the cases which survive the procedure[8]. The study of the pathological processes of the upper right abdominal quadrant and of the operative procedures most suitable to this region has received a marked impetus from the beneficent results attending early operations. In inflammatory diseases of the gall-bladder and biliary passages, medicinal measures are almost always purely palliative; they are not curative. Dietetic, hygiene, physio-therapeutic and medicinal measures should precede, accompany and supplement the operative treatment of cholecystitis and its complications. To this dictum, there should be no exceptions.

Gall-stones, irrespective of size, number, nature and location, lodged or impacted in the gall-bladder, in the cystic, hepatic or common duct, or in a diverticulum, call for early operative removal. All collections of pus within the gall-bladder, bile tracts or in juxta-position to the biliary system, call for early operative evacuation.

For the relief of cholecystitis, cholelithiasis, obstruction of the cystic duct, pericholecystic adhesions, etc., two operations, cholestostomy and cholecystectomy, are generally performed. These two operations, judged by the results obtained, possess merits that have their respectice indications[5], limitations, difficulties of performance, operative and postoperative accidents, morbidity and mortality.

Greater precision in diagnosis, early and timely operations, better operative technic and judicious pre- and postoperative management of gall-bladder diseases have extended the indications of cholecystectomy, lessened its operative difficulties, improved its immediate and remote results and contributed to its more frequent performance. The mortality attending timely gall-bladder operations, properly performed, is, at the present time, almost negligible. "During the eleven months from November 1, 1915 to October 1, 1916, we performed 776 cholecystectomies with a mortality of 1.77 per cent[1]." "The treatment of cholecystitis with or without stones is low, only 1.8 per cent in 2460 operations performed during the period of three years"[2]. "Forty-five cholecystectomies were performed for acute cholecystitis, with no deaths, and twenty-two cholecystostomies, with one death. There were eleven deaths in 890 cholecystectomies for chronic inflammation of the gall-bladder"[3]. We feel confident that additional improvement is feasible. The best time to operate for the cure of gall-bladder and bile-duct disease is before the

*An original article.

advent of irreparable anatomical changes. At this stage, the mortality should be less than 1 per cent[6] and complete recovery the rule. Cholangitis, choledochitis and common duct stone are late and serious complications, difficult of operative relief and sometimes fatal.

In this article we discuss the following operative and postoperative complications incident to surgery of the biliary tract:

(*a*) Incomplete disappearance of symptoms and recurrences.

(*b*) Postoperative adhesions.

(*c*) Operative and postoperative hemorrhage.

(*d*) Postoperative external fistulae (operative bile-duct injuries).

(*e*) Postoperative biliary peritonitis.

Incomplete Disappearance of Symptoms and Recurrences

In acute or chronic cholecystitis, primary or secondary, calculous or non-calculous, early or late, isolated or associated, the paramount indications are to arrest infection, remove inflammatory products, correct existing anatomical changes, restore liver function to normal, nullify the effects of disease sequelae and prevent the return of inflammatory disturbances. The avoidance of postoperative distress in all cases is more than one can reasonably expect.

By instituting operative relief at the onset of the disease, when the inflammatory process is still limited to the gall-bladder or before it has seriously involved, damaged or crippled any contiguous organ, one is far more likely to secure a complete and permanent disappearance of symptoms. The ideal time to operate is while the condition, local and general, of the patient is good. Early operation is easy of execution and forestalls complications; delay invites disaster. Delay permits the development of dangerous local and regional complications, *viz.* cholangitis, perforation, pancreatitis, common duct obstruction, etc., and may induce remote disturbances (vascular, cardiac and arthritic). The chief avoidable technical causes of incomplete cure are: Defective or improper technic; undue operative trauma; lack of thoroughness in the digital and instrumental exploration of the bile-ducts. In most instances, common-duct stones can be detected by introducing the finger into the foramen of Winslow and milking the choledochus between the fingers. No doubt, some recurrences are due to a calculus or calculi overlooked at the previous operation.

Diseases of the right hypochrondriac and epigastric regions are insidious in development, are frequently unrecognized, not uncommonly misdiagnosed and often come to the operating table too late to be completely and permanently relieved. Tardiness of operative treatment is the main cause of incomplete cures and of recurring symptoms. The cases with advanced pathology are those that present a stormy postoperative course.

The increased popularity of cholecystectomy (84 per cent of patients after cholecystectomy are free from all symptoms[4]) is due to the fact that cholecystostomy often gives only incomplete and temporary relief. A successful cholecystectomy, followed by appropriate medical treatment, cures disturbances directly dependent on disease processes limited to the gall-bladder, prevents the extension of inflammation from this organ to contiguous organs and exerts a beneficent influence on local and regional inflammations due to or maintained by it: Hepatitis, pancreatitis, duodenal ulceration, etc. A retained diseased gall-bladder is a frequent cause of ill-health and a potential source of future trouble. It is a decided factor in the recurrence of gall-stones, of infective inflammation and in the persistence of local and regional symptoms such as pain, indigestion, etc. Obstructive jaundice, either intermittent or chronic, developing after cholecystostomy is due to a stone or stones overlooked or reformed in the gall-bladder, lodging in the common bile-duct, to stricture or kinking of the choledochus, to fibrosis and traction of an adherent contracted gall-bladder, etc.

Deaver[7] states that 65 per cent of his recurrences could have been prevented by removal of the gall-bladder. Cholecystectomy often gives brilliant immediate results and eliminates the annoyance and discomfort incident to prolonged postoperative drainage. After cholecystostomy, the persisting symp-

toms are due to residual pathology; after cholecystectomy, they are mainly of mechanical origin and often result from operative trauma. Careful examination of the cystic, hepatic and common ducts and the systematic removal of any duct obstruction, calculous or inflammatory, secures better results. The removal of all foci of infection, proximal or distal to the hepatic system (tonsillar, dental, duodenal, appendiceal, colonic, etc.), is essential to perfect health. Appendectomy is nowadays almost a routine procedure when operating on the biliary tract.

The physiology of the biliary system is intricate and our knowledge of the functions of the gall-bladder is as yet incomplete and indefinite. Therefore, the gall-bladder should never be removed in the absence of positive indications or if it be highly probable or evident that "it can come back." Though the human body, owing to its great power of adaptation, compensates for the loss (by disease or by removal) of the gall-bladder, the needless sacrifice of this organ is a mutilation and can lead to invalidism;it may prove fatal.

In a large number of cases recovery is gradual. In others, even in the hands of the most experienced and irrespective of the type of operation performed, permanent and complete relief is not obtained. The persistence and recurrence of symptoms are due to the patient's nervous instability, the existence of long-standing and advanced pathological changes not admitting of operative correction or removal, such as hepatitis, pancreatitis, etc., adhesions, operative injuries, inadequate pre- and postoperative treatment and metabolic disturbances. "Pancreatitis associated with or secondary to cholelithiasis has recurred after cholecystectomy and led to pancreatic cyst-formation"[9]. A thorough knowledge of the technic and the respective indications and limitations of cholecystostomy and cholecystectomy will enable the operator to remove and to obviate most of the frequent causes of incomplete relief, such as impaired motility, elasticity and contractility of the gall-bladder, strictures or kinks of the cystic duct, adhesions of the pylorus, transverse colon or omentum to the gall-bladder or liver, duct obstruction, etc.

Postoperative Adhesions

After gall-bladder and bile-duct operations, patients often complain of symptoms referable to adhesions existing between the gall-bladder and neighboring viscera. The operator must aim to minimize as much as possible the formation of peritoneal adhesions. In 3000 abdominal operations, symptoms manifestly due to postoperative adhesions were present in from 10 to 12 per cent of cases; in 3½ per cent of these, operative relief was necessary (Payr-11). It is important to differentiate between the pain, tenderness, mechanical interference and other symptoms caused by adhesions of operative and postoperative origin and the neuro-psychogenic symptoms of postoperative neuroses, between adhesions, inflammatory in nature and congenital peritoneal folds. Postoperative peritoneal adhesions, irrespective of nature or location, are due to such factors as infection, intraperitoneal hemorrhage, mechanical and chemical injury of the serosa, denudation of peritoneal surfaces, foreign bodies, such as gauze-drains, drainage tubes, etc.

Postoperative cholecystic and pericholecystic adhesions may follow simple as well as difficult operations. They are occasionally symptomless. Usually they are provocative of persisting discomfort, permanent dysfunction and chronic obstructive disturbances. Patients with many pericholecystic adhesions can seldom be made entirely free from symptoms. Adhesions, by kinking or compressing the cystic or common duct, impede the flow of bile; biliary colicky pains and other distressing symptoms may result. When adhesions angulate or drag on the pylorus and duodenum, gas distress, gastric distension, spasm, vomiting and other digestive disturbances are likely to follow. Omento-cholecystic adhesions exerting traction on the greater curvature provoke painful gastric peristalsis[10]. The fixation by scar tissue of the pyloric end of the stomach or of the hepatic flexure of the colon to the liver is a not infrequent cause of gastric disturbances.

Innumerable methods and substances—liquid vaseline, sterilized olive oil, normal salt solution and non-absorbable membranes, such as rubber dam, collodion, oiled silk, etc.

—have been recommended to limit, and to prevent the formation of peritoneal adhesions. They have all been found wanting. In the present stage of our knowledge, surgeons are not justified in using any of these agents in the peritoneal cavity. The absolute prevention of peritoneal adhesions is as yet an unsolved problem.

Adhesions are a frequent cause of incomplete relief, of failure to cure, of recurring inflammatory and obstructive disturbances; all factors leading to adhesion formation are to be studiously eliminated. Adhesions being infectious, inflammatory and traumatic in origin, their incidence as to frequency and extent can be minimized by the practice of strict asepsis, the observance of great gentleness in all operative manipulations, the infliction of minimal damage to the tissues and the adoption of the technic most appropriate to the case at hand. We will also avoid such contributory causes as the use of chemical irritants, needless handling and exploring of organs, the undue exposure of the serosa to the air. We will endeavor to reduce intraperitoneal hemorrhage to a minimum, to limit, as to duration and amount, gauze or tubular drainage to the bare desideratum and to cover with peritoneum all denuded surfaces. It is needless to say that the surgeon should operate with the greatest speed consistent with the patient's safety and thoroughness of execution. Chemicals, tincture of iodine, Dakin's solution, etc., cause the formation of adhesions by destroying the frail endothelium of the peritoneal surface. To inhibit the prolonged contact of denuded peritoneal surfaces, some advise the stimulation of the peristalsis by purgation; others recommend that the patient's position be frequently changed.

Timely removal of gall-bladders presenting pathological changes minimizes the incidence and often prevents and suppresses cholecystic adhesions; it gives access to pericholecystic adhesions and may enable the operator to remove or forestall their sequelae. Nevertheless, the indiscriminate removal of the gall-bladder is unsurgical, dangerous and is to be condemned. Cholecystostomy, with its associated prolonged drainage and possible escape of bile into the wound, leads to the formation of adhesions. Early removal of drains, gauze or tubal, is desirable. Bile-soaked drains excite the production of dense adhesions.

The removal of shrunken, atrophied, contracted gall-bladders or of those embedded in adhesions is difficult and leaves a raw surface which should, if feasible, be covered with an omental graft or by peritoneum. As much as possible, cover with peritoneum the fissure in the liver left by the removal of the gall-bladder and all other denuded areas and thereby obviate to a very large extent the occurrence of troublesome adhesions. One or two fine catgut stitches joining the lesser omentum to the mesocolon, or fastening the great omentum into the hepatoduodenal angle, walls off dangerous raw surfaces and may insure against the attachment of adhesions to the more sensitive pylorus or duodenum. Dr. C. H. Mayo says: Avoid annoying and permanent disturbances "by forming your own adhesions", by bringing up and placing the great omentum between the liver and the contiguous denuded areas.

In cholecystostomy, the drainage-tube having been brought through the abdominal wall, preferably through a stab wound, the gall-bladder is dropped back to its normal position; thereby a source of postoperative discomfort is avoided. The anchoring of the gall-bladder to the abdominal wall is undesirable, unphysiological and not infrequently causes permanent distress. The recurring attacks of pain and tenderness and the dragging sensation in the region of the scar are often relieved by fomentations and massage.

In dealing with adhesions in the bile-duct region, the surgeon should be exceedingly circumspect in order not to injure the important structures that are present in this region. The gall-bladder may be so bound down by inflammatory adhesions as to make its removal inadvisable. It has been known to cap a perforated duodenal ulcer. A duodenal fistula[12] has been known to follow the separation of a gall-bladder adherent to the gut.

Operative and Postoperative Hemorrhage

Operative and postoperative hemorrhage attending operations on the biliary system is an alarming complication and may prove most troublesome and difficult to control; it may end fatally.

In the absence of jaundice, hemostasis is effected by the methods ordinarily employed to arrest hemorrhage in other abdominal operations. In a non-jaundiced patient, hemorrhage, operative or postoperative, is usually easily checked if the operator be conversant with its various causes. What are these causes? Overlooked and non-ligated bleeding points, insecurely tied ligatures, premature absorption of ligature material, accidental tearing or section of normal or anamalous vessels not infrequently embedded in inflammatory tissue, and oozing resulting from the tearing of adhesions and the dissecting of the gall-bladder from its hepatic bed. It is essential that the operator secure an exposure of the operative field ample to enable him to identify the important structures present in this region. A suitable operating table, tilting or rotating, if possible, of the liver, wide retraction of the wound-edges and walling off of the intestines by gauze pads, all aid in securing a clearer view of and an easier access to the operative region. The incision should be adequate in length; it must permit the proper examination of the bile-ducts and the accompanying vessels. It is all-important that the operator be well versed in the topographical anatomy of the biliary region[13]; especially, should he be well acquainted with the normal and anomalous distribution of its blood vessels and the variations in the mode of union of the bile-ducts. Whenever feasible, excision should begin at the cystic end of the gall-bladder, proceding from below upward and in the direction opposite to the lymph-current; there is less hemorrhage, the operative field is less obscured by blood and perfect hemostasia more easily secured. The cystic artery lies above and behind and not along the side of the cystic duct and presents variations in number, origin, size, length, tortuosity and anatomical relations. A single cystic artery is present in 88 per cent of individuals; in 12 per cent, there are two cystic arteries. The bile-ducts are covered by plexuses of blood and lymphatic vessels[14]. If these be cut, troublesome hemmorhage may follow. If possible, isolate and ligate the cystic artery before it divides into its two branches and let it drop back away from the surface of the liver. In clamping the cystic artery, seize only the artery and its surrounding connective tissue. Should the knot of the forceps slip from or be pulled off the cystic artery, or should this same vessel or an important branch thereof be accidentally torn or cut before being grasped, profuse bleeding will occur. The indication is to catch immediately the bleeding point without injuring the bile-ducts. Compress the bleeding point with the forefinger and catch with a few mouse-toothed forceps the tissues about the forefinger. Then lift the forceps, remove the finger and clamp the artery. After all the bleeding points have been securely ligated and the hepatic oozing fairly well controlled by peritonization, gauze-tampons, etc., the operative wound is closed. Bleeding points in the abdominal wall are located, clamped and ligated without difficulty.

Postoperative bleeding from the cystic artery is to be recognized and controlled at once; if not checked, death may result from intraperitoneal hemorrhage. When drainage has been used, blood appears on the dressings and is detected early; in the absence of drainage, it escapes into the peritoneal cavity and is only revealed by the symptoms of acute anemia. This argument is used by the opponents of cholecystectomy without drainage. Drainage provides an outlet for extravasated blood, escaped bile and inflammatory exudates.

Oozing hemorrhage is more frequent and more dangerous after cholecystectomy than after other laparotomies. The oozing comes mainly from the bed of the gall-bladder; it often is copious and very difficult to arrest. When removing the gall-bladder, incise its peritoneal coat in such a manner as to form two flaps of serosa. Use these to peritonize the denuded gall-bladder bed; if necessary, fix an omental graft to the raw liver surface. The cellular tissue betwen the gall-bladder and the liver is at times very vascular. In

removing the gall-bladder from its bed, minimize hemorrhage by sharp dissection of this tissue and the least amount of trauma to the liver. The oozing of blood may be checked by the pressure of pads soaked in hot salt solution. If the denuded area be extensive and the oozing difficult to control, a gauze-pad is spread over the denuded hepatic area and extends from the stump of the cystic duct well beyond the liver. This is done to stop oozing and serve as a drain. In many cases a cigarette drain suffices. After cholecystostomy and cholecystectomy, the gauze packing is to be cautiously removed lest oozing recur from the gall-bladder bed and other denuded areas.

In the presence of severe obstructive jaundice, owing to the fact that the coagulation time of the blood is increased from three or four minutes to ten or twelve minutes or even longer, operations on the biliary tract are extra-hazardous. Icteric patients, owing to their low general resistance and great liability to serious and, at times, fatal hemorrhage, should not be subjected to operations that are not immediately and absolutely necessary. The cholemic patient's great liability to hemorrhage must be foreseen; it necessitates appropriate and adequate pre- and postoperative care. Though cholecystectomy is incontestably the better operation as to the rapidity and completeness of cure, nevertheless, in cases of deep jaundice, it is better to do the minimal amount of operating and therefore to perform the lesser operation. Excision of the gall-bladder, if associated with much injury to the liver, may be followed by serious oozing from the denuded liver surface. Cholecystostomy permits the slow decompressing of the liver by drainage through the gall-bladder; later, after the jaundice has subsided, the hepatic function has improved and the patient's resistance increased, the other therapeutic indications may be met [17]. When in jaundiced patient's indicated operations can be safely postponed, they should be adjourned. "If the jaundice is just beginning to show at the time the patient presents himself for treatment, it may be best to operate without delay, but if he comes when the jaundice is decreasing, it is best to wait until it has disappeared or is at a standstill."[15]. Operation should not be too-long delayed, as prolonged obstructive jaundice is a factor in the causation of biliary cirrhosis.

Before operating on cholemic patients, the coagulation time of the blood and its urea content are to be brought to approximately normal. It is also desirable that there be a normal total urinary output and an absence of albumin and casts. The existing hepatorenal insufficiency must be treated. Very frequently, one must operate in the absence of ideal conditions.

Horse-serum, defibrinated blood, etc., administered subcutaneously, decreases the clotting time of the blood. All our jaundiced patients receive calcium lactate per mouth for several days before and after the operation. According to Lea and Vincent, the clotting time of blood is lowered by doses of calcium lactate taken by mouth each day for three days. In all cases of obstructive jaundice, our patients receive for three days preceding the operation a daily intravenous injection of 5 to 10 Cc. of a 10 per cent solution of calcium chloride in redistilled water. Walters says that 5 Cc. of a 10 per cent solution of calcium chloride in redistilled water, if given intravaneously for three days immediately prior to operation, brings the clotting time within normal limits despite a most intense jaundice. Blood transfusions (whole blood is preferable) [16], before and after operation, are useful in emaciated, depressed, jaundiced patients, often enabling them to successfully undergo the ordeal of a serious surgical operation. Blood transfusions, though valuable, do not have in obstructive jaundice the specific effect that they have in hemorrhage of the new-born. By applying, both before and after operation, dry and moist heat to the hepatic region, the activity of the hepatic cells is increased. The general condition of jaundiced patients can be much improved by the ingestion of large amounts of water per mouth, of normal salt solution subcutaneously and of glucose and sodium bicarbonate solutions rectally. The patient's carbohydrate balance should also be reenforced.

Postoperative External Fistulae

All postoperative external fistulae of the biliary tract, intermittent or chronic, should be treated operatively if they be attended with discomfort and health impairment and do not show any tendency to spontaneous closure. According to the nature of the discharge, they are classified into mucous and biliary; according to site of origin or internal orifice, into gall-bladder, cystic, hepatic and common duct fistulae. Persisting sinuses due to careless technique, lost sponge, forgotten drain, etc., must be distinguished from fistulae.

External Mucous Fistulae: Cholecystostomy intentionally creates a biliary fistulae. In the absence of obstruction or stenosis of either the cystic or common bile-duct, such operatively-created fistulae heal spontaneously after a shorter or longer period. If the cystic duct be completely obstructed, the fistula becomes mucous in type and closes and opens intermittently until the cause has been operatively removed. Spontaneous permanent closure rarely occurs in mucous fistulae resulting from:

(a) Impaction of a calculus at the junction of the gall-bladder and cystic duct;

(b) Stenosis of the cystic duct following calculous or other traumatic ulceration;

(c) Compression of this same duct by cicatricial tissues, traumatic or inflammatory in origin.

The requisites for spontaneous healing are obliteration of the cavity of the gall-bladder and conversion of the organ into a fibrous cord or mass.

The removal of the entire gall-bladder is, in the absence of any common duct obstruction, the best treatment for a mucous fistula. The cause, origin and source of the fistula and the fistula itself are suppressed by cholecystectomy. In acute and chronic cholecystitis, when stenosis of the cystic duct due to traumatic ulceration is present, the ablation of the gall-bladder prevents the development of mucous fistulae. If the cystic duct and the gall-bladder show but slight alteration, it may suffice to remove the impacted stone. As a rule, this calculus is not of new formation; it was present and overlooked at the time of the first operation. If the common duct be the seat of irremovable obstruction (partial or complete), the cystic duct and the gall-bladder are cleared of their contents and a cholecyst-enterostomy is performed. Of the three procedures just mentioned, ablation of the organ is the operation of election for the cure of mucous fistulae of the gall-bladder. Entero-cholecystic anastomosis is difficult of execution; it is a measure of last resort.

External Biliary Fistulae: A safe and successful cholecystectomy necessitates an adequate exposure of the operative field and a careful exploration of the bile-ducts. If, at the time of the excision of the gall-bladder, calculi present in the common duct are overlooked, a biliary fistula not uncommonly results. Biliary fistulae due to calculous occlusion of the common bile-duct, if the duct be otherwise normal or almost normal, close upon removal of the occluding calculous or calculi. Biliary fistulae due to compresson of the common duct by cicatricial tissues are cured by the removal of the compressing agent. An operator, unskilled and inexperienced in biliary surgery and possessing only a superficial knowledge of the many anatomical variations in the mode of union, length and course of the bile-ducts, is very liable to ligate, crush, cut or resect the hepatic or common duct. An incision ample in length permits identification and palpation of the ducts and minimizes their liability to injury. The cystic duct must be seen when ligated. The operator must see that he is tying it and nothing else. The vast majority of duct injuries are due to errors in technique or forgetfulness of the anomalies of this region. Bile-duct injuries are of more frequent occurrence if the topography of the biliary region is altered and distorted by adhesions.

In removing the gall-bladder, ligate and divide the cystic duct close to the choledochus and be careful not to traumatize the latter. In difficult cases, it is better to leave a stump of the cystic duct then to run the risk of injuring the common duct. Dilatation of the stump of the cystic duct is uncommon and almost always of negligible clinical significance. Some biliary fistulae have followed

too low ligation of the cystic duct. Incisions giving inadequate exposure of the operative field are responsible, in part, for injuries to the bile-ducts. "Working in the dark" begets poorer results and a higher percentage of complications. Under the most favorable conditions, the operative field is a limited one and important structures lie in such close proximity that accidents are not uncommon. Duct injuries are less common since retrograde cholecystectomy has come into more general use.

All bile-duct injuries should be repaired immediately, that is, at the time of infliction; if overlooked or improperly repaired, a biliary fistula or a biliary peritonitis follows. Spontaneous cure of serious bile-duct injuries is so infrequent that its occurrence, for practical purposes, can be disregarded.

The indications for operation are determined by the patent's general condition, the age of the fistula, the amount of discharge and the probabilty or non-probability of spontaneous permanent closure. The normal flow of bile into the intestines must be reestablished; there must be a permanent passage-way for the bile from liver to intestines. Permanent biliary fistulae that discharge profusely entail loss of appetite, emaciation and, in time, death. Reconstructive bile-duct operations are failures when the line of suture yields or when a secondary stenosis or an ascending angiocholitis develops. In irreparable common duct injuries, the anastomosis of the gall-bladder to the stomach, duodenum, jejunum or colon is indicated. This indication cannot be met if the gall-bladder has previously been removed or if it be the seat of degenerative changes unfitting it for anastomosis. The anastomosis to the colon is a measure of necessity, performed only if the patient's condition be precarious or when the anatomical conditions present do not permit prolonged operative maneuvers. The saving of the bile to the organism improves digestion and avoids malnutrition. The physico-chemical functions of the bile are of value in intestinal digestion.

Slight parietal injuries of the hepatic or common duct are to be sutured. Complete or almost complete division of either of these conduits may be secured by circular suture of the divided ends with or without mechanical aids, such as a rubber-tube, glass-tube, etc., allowed to emerge through a separate opening in the duodenum. The line of union is to be reinforced with omentum. In complete bile-duct division, it is difficult to find the proximal and, especially, the distal end, and it is still more difficult to successfully suture the ends to one another. Reconstruction of the bile passage is always a formidable procedure, even to the most expert technician. The extent, location and nature of the duct injury, the associated pathology (dense, firm adhesions not easily separated, etc.) and the patient's general condition must all be considered so as to choose the operative technic most appropriate for the case at hand. When, owing to the length of the damaged area, the two ends of the duct cannot be apposed, the defect is to be bridged by inserting one end of the rubber-tube in the upper segment and then passing the other end though the lower segment into the duodenum; omentum or other tissue is sewed over the exposed portion of tube and reconstructed duct [19]. New canals built by the aid of inverted veins, fascial, omental or other tissues do not give lasting satisfactory results. These newly created ducts, not being mucous-lined and not being provided with a submucosa, invariably contact. If the distal end of the divided duct cannot be found or if it be unfit (too short, too friable, etc.) for end-to-end suturing, hepatico-duodenostomy[18], the implantation of the proximal end of the hepatic duct into the duodenum and hepatico-gastrostomy, implantation of the proximal end of the hepatic duct into the stomach, are practiced. Both of these operations can be done upon a rubber-tube and direct suture.

Postoperative Biliary Peritonitis

Circumscribed or diffuse postoperative biliary peritonitis is due, partly or wholly, to the escape of bile into the peritoneal cavity. When generalized, it is a serious complication. It follows the soiling during the operation of the operative field with gall-bladder and bile-duct contents or the leakage after the operation of bile into the peritoneal cavity. The site of leakage may be an oozing liver surface (gall-bladder bed), dam-

aged or cut normal or anomalous bile-ducts, an improperly or insecurely ligated cystic duct whose ligatures have slipped or been absorbed prematurely. If the cystic duct be divided and ligated too close to the choledochus, the bile pressure may force off the ligatures; bile then escapes into the peritoneal cavity and biliary peritonitis results.

The prophylactic treatment of biliary peritonitis consists in the careful avoidance and successful removal of its etiological factors. By the aid of abdominal pads, the operative field is carefully walled off from the general peritoneal cavity, thus minimizing, and at times, preventing the contamination of the latter by the escape of infected or non-infected bile. Before closing the operative wound, see that the cystic duct is securely tied by two ligatures and that all bile-duct injuries are repaired. Fatalities due to overlooked duct injuries are not uncommon.

General peritonitis is always a possibility when drainage is omitted. For several days after cholecystectomy, oozing of serum, blood or bile occurs from the gall-bladder bed. Drainage prevents the accumulation of effusion in the peritoneal cavity and provides for the escape of exudates. In practically all difficult operations on the biliary tract, I drain the subhepatic space and the renal well. After empyema, rupture of the gall-bladder and in cases in which homostasis is not perfect, drainage for a few days is imperative. Healing is neither unfavorably influenced by drainage nor are undesirable sequelae to be feared. Leakage is more frequent when the gall-bladder is removed from above downwards [20]. Walker states, "this is a further argument for careful isolation and ligature of the cystic duct and the removal of the gall-bladder from below." In many cases, it suffices to place a soft rubber tube or cigarette drain along the gall-bladder bed and to make it project through a stab wound in the loin or through a stab incision an inch or two to the right of the operative wound which is then closed. Experience has taught us that a stiff tube may cause much distress and a soft rubber one, actual danger through kinking and blockage.

The prophylaxis of biliary peritonitis is all important. This is due to the fact that the treatment of this affection, like that of other forms of acute peritonitis, is very unsatisfactory. The indications are to evacuate all bile collections, to check the further escape of bile into the peritoneal cavity and to accelerate the elimination of bile-salts from the circulation. To arrest the escape of bile, it is necessary to expose and repair the injured bile-duct and to drain the biliary region. Hypodermoclysis and proctoclysis are employed to combat the existing toxemia. These patients are very sick and unable to withstand any lengthy and complicated operative maneuvers. Symptoms are met as they arise by the usual measures.

BIBLIOGRAPHY

1. Mayo, C. H.: The Relative Merits of Cholecystostomy and Cholecystectomy. Surg., Gynec. and Obst., 1917, xxiv, 281.
2. Mayo, C. H.: Jaundice and Its Surgical Significance. Collected Papers of the Mayo Clinics, 1919, xi, 116.
3. Judd and Lyons: The Mortality Following Operations on the Liver, Pancreas, and Biliary Passages—A Statistical Study. Collected Papers of the Mayo Clinic and the Mayo Foundation, 1923, xv, 217.
4. Martin: Recent Controversial Questions in Gall-Bladder Surgery. Ann. Surg., 1924, Lxxix, 424.
5. Heineck, A. P.: The Surgical Indications of Inflammatory Diseases of the Gall-Bladder.
6. Bunnell: Surgery of the Gall-Bladder, Calif. State; J. M., 1923 xxi 287, 330.
7. Moore. A Comparative Study of the End-Results of Cholecystostomy and Cholecystectomy. Surg., Gynec. & Obst., 1921, iii, 41.
8. Graham: Surgical Therapy and Net Results in Gall-Bladder Disease. Canad. M. A. J., 1922, xii, 767.
9. Ballin & Saltzstein: Pancreatic Cyst Following Cholecystectomy. J. A. M. A., 1921, Lxxvi2, 1484.
10. Davis: What Constitutes a Good Result in Gall-Bladder Surgery? Tr. West. Surg. Assn., 1918, xxviii, 205.
11. Naegeli: Die klinische Bedeutung und Bewertung der abdomininellen Verwachsungen. Deutsche Ztschr. f. Chir., 1921, CLxiii, 408.
12. Carroll: Complications Following Surgery of the Gall-Bladder and Bile Ducts. Minnesota Med., 1922, v. 307.
13. Eisendrath: Operative Injury of the Common and Hepatic Bile-Ducts. Surg., Gynec. & Obst., 1920, 1.
14. Bourgery et Jacob: Traite complet de l'anatomie de l'homme, 1839, v.
15. Judd: Problems in Surgery of the Gall-Bladder and of the Bile Ducts. J. Kansas M. Soc., 1921, XXI, 185-189.
16. Jones: Blood Transfusion in Pernicious Anemia. J. A. M. A., 1926, p. 1673.
17. Crile: Some Special Points in the Surgery of the Gall-Bladder. Med. Rec., N. Y., 1920, xCvii, 584.
18. Balfour, D. C.: The Technic of Hepaticoduodenostomy, With Some Notes on Reconstructive Surgery of the Biliary Ducts. Ann. Surg., 1921 Lxxiii, 345.
19. Lecene et Gaudart: La reparation de la voie biliaire. Journal de Chirurgie, 1922, xx, 237.
20. Walker: Complications Following Cholecystectomy. Boston M. & S. J., 1921, CLxxxv, 52.

CLIMATE AS RELATED TO THE TREATMENT OF PULMONARY TUBERCULOSIS *

By GEO. H. BARKSDALE, M. D.
Charleston, W. Va.

UNFORTUNATELY there are yet physcians, some nurses and many, many laymen who without thought or through ignorance advise all consumptives to go away. I use the "away" advisedly because there seems to be no uniform idea as to where they should go nor what climate they should seek, but more unfortunately with no regard as to the wisdom of such advice as applied to the case at hand. Granting that change of climate is a good thing there are certain factors which must be seriously considered, namely:

1. Can the patient secure adequate funds?
2. Is he a suitable case for special climatic therapy?
3. Where should this particular patient go?
4. In total, will the return in terms of health justify the means?
5. Last, and probably most important, are you, the adviser, through special study and experience capable of deciding the above?

Assuming that we have a consumptive, active, who wishes to go to a resort for the tubercular such a patient must be impressed with the fact that money is all essential. It is impossible to consider earning even the smallest part of his support. Nothing is more important to successful therapy in this disease than mental rest. He must have adequate funds to provide not only food, but excellent food and plenty of it, medical services, comfortable quarters, in short—everything must be as good or better in the new abode as back home. If the patient can't get this straight in his mind, one is probably dealing with an unintelligent patient and such patients, I might add, are doomed. For in no disease is a successful recovery so dependent on good sense, good character, and perseverance as tuberculosis. Nothing can be more pathetic than the poor lunger who through mis-information or stupidity finds himself stranded in the great Southwest, alone, sick and without funds. The care of consumptives in certain districts of the Southwest is a large part of their stock and trade; there being no more reason why these people should take the consumptive in and care for him than hotel keepers in Charleston should take in beggars and feed them.

The cry goes up over and over again from that part of the land: "Keep your indigent consumptives at home." There are a favored few who do find light work at low wage, but consider the number of others who are looking for just such work and take stock of your own chances. In 1920, Colorado Springs, Denver, El Paso, San Antonio, Phoenix and Los Angeles cared for wholly or in part through municipal agencies, 7,319 tuberculous individuals. This means an average of one indigent tuberculous person to every 155 of the entire population of these cities. This, of course, takes no account of the hundreds of well-to-do consumptives who are anxious and struggling to find a place for themselves in these cities. By way of control, Cleveland, Ohio, gave aid to 1 for 231 of its population and be sure that Cleveland, with its comparatively small tuberculous population, gave aid to a vastly larger percentage of applicants than the Southwest could afford to give. Approximately 75 per cent of the Southwest cases were non-residents or migratory consumptives, while 11 per cent of the Cleveland cases were such, and it is pathetically true that one-half of these cases were sent West on the advice of

* Read before the West Virginia Tuberculosis Association, Terra Alta, June 16, 1926.

physicians and that 50 per cent of them died within 6 months after arriving there.

Visualize if you can a long row of widowless cubicles with gas lights along a central hall rented out by the night in Denver, put in one of these holes a forlorn homesick lad, coughing and sweating by night and walking the streets by day looking for work. If you get the picture, consider before you advise the patient to go West or elsewhere unless he has money.

It is to be borne in mind that there are good and sufficient reason for advising a change in climate, there are also many good reasons for advising consumptives to remain at home. I quote from P. H. Bulletin No. 35: "The doctor who habitually prescribes a distant removal is usually one who still harbors the idea that there is a specific climate for tuberculosis." Such a physician is an exponent of some particular region from fashion caprice or from lack of knowledge of other places. This may be entirely true; however, I should rather believe that it comes about through the lack of knowledge of theraphy of the disease, just plain lack of interest and knowledge. Remember what is being said here applies to removal from home or elsewhere purely on the assumption that a change of climate is indicated, social and economic conditions are not being considered. My personal feeling in this connection is that all patients without exception would receive benefit by a residence in a properly ordered sanatorium even if the patient could remain there only a few weeks. The education received, if nothing more, is of inestimable value. The opinion in general is that if a case is doing well and making satsfactory progress he should remain where he is, however, such patients as it were at times become "stale" or arrive at a stand-still. At such times a complete change of climate is often most fortunate. One who dreads the long Southern summers will revel in the long, cool days of Saranac Lake. A thin, high-strung patient, shivering in a cure chair in New England, may fairly luxuriate in one of the Southern resorts. One with acute bronchial catarrh and much thin sputum may well go to the arid Southwest. I quote again from U. S. P. H. Bulletin, No. 35: "At the Marine Hospital Sanatorium, Fort Stanton, New Mexico, the results have been nearly three times as good in the cases which left their home station without fever as in those who had a temperature of 100 degrees or more, within two weeks of departure. The deaths in those leaving afebrile were those leaving with fever, as 22 to 59. The arrest as 19 to 7½. The apparent cures as 10 to 3. A period of observation is frequently desirable in order to exclude hopeless cases and to permit an intelligent selection of climate if a change is needed." My deduction from the above would be that no patient unable to travel alone and get about comfortably and safely should be sent to a distant climate for climate's sake. The question having been settled that there is to be a change of climate the momentous question presents itself as to where should the patient go? The feeling usually is that like the green hill far, far away, there is always some remote place where the climate is perfect, or at least, somebody said so. When the population of what is now the United States was mainly along the Atlantic coast, consumptives were ordered to go to the Alleghenies, as the populated area extended westward and more became acquainted with the Allegheny region, the advice was to go to the Pine woods of Michigan, then to Minnesota, and the Rocky Mountains, then to the Pacific coast and finally to the arid Southwest. (Trask).

It is interesting to note that in this quest of the perfect climate one encounters the same standardized regime, rest in the open, with good food of high caloric value and careful medical supervision. This is the same in the mountains of Switzerland and America, the Rivera, or California, the arid Southwest or the snow-covered stretches of Canada—it is all the same. The keen observer might well ask himself, especially if he came from West Virginia, "I wonder if I couldn't have done the same thing at home?" Latham states that tuberculosis is rife among the watchmakers of the high Alps, the death rate among our native Indians is not appreciably less in those tribes which have al-

ways lived in the arid Southwest than in other favorable climates. Neither the salt in sea air, the ozone of forests, nor the rarified atmosphere of mountains are medicinal in themselves. They simply typify an outdoor life. Physicians are practically agreed that there is no specific climate for tuberculosis, (F. C. Smith, Surgeon U. S. P. H. Service).

Concerning special climate the matter of altitude, humidity, temperature, sudden changes of temperature, winds, dust and smoke have to be considered. High altitudes at least are not neutral. It seems that patients removed to rarified air either promptly rally well or do poorly. The theory being that the deep breathing and general respiratory stimulation improves the pulmonary circulation, and yet Foster of Colorado Springs, a high altitude resort, has designed a corset-like affair to restrain the movements of the chest, applying directly to the lungs, one of the cardinal principles of tuberculosis therapy—Rest. High altitudes are not for the weak, anemic, nervous, emotional dyspeonic or advanced cases. The phlegmatic stoutish and young may derive marked benefit in an elevated dry climate. Humidity—In warm climates of relatively high humidity, the air being fairly charged with moisture, the evaporation from the skin is, of course, slower, consequently the heat is more oppressive, "sticky" as we call it. The moisture from the body evaporating slowly, hence, retained body heat. Were the same air cold, the dissipation of heat is greater, the moist blanket of air about the body serving as a conductor. We refer to such cold as "raw" or "goes to the very bone." Further, very dry air debilitates the mucous membranes of the nose and throat. One is in a state comparable with one working in an overheated office building. It is a common observation that such air is more conducive to common head colds and catarrhal conditions of the nose and throat than the storms outside.

Temperature — The middle temperature with reasonable fluctuation seems most desirable. The latter seems to exert a moderately tonic effect. Sudden extremes of temperature obviously are disagreeable and dreaded. However, I have never noted that respiratory infections bear any relation to such fluctuation, though the man in the street will say without hesitation that such changes are enough to kill one. Providing the clothing is properly adjusted to the changes, I believe there is little harm in such fluctuations. Dust and dust storms so frequent at certain seasons of the year in the Southwest are a great drawback to this climate.

From the above survey of climatic conditions, one cannot but feel that our climate here in West Virginia, weighing all conditions fairly, is not bad. On the contrary, I am convinced that the high ground of our state is, from a climatic standpoint, moderate in all qualities. If one be well able to do so, a change for change's sake is good. However, my conclusions based on my own observation and the survey of the literature in preparation of this paper has led me to the honest conviction that if one can't recover from tuberculosis in West Virginia, environment, medical care, food, etc., being equal, they can't recover anywhere. I cite for comparison one of, if not the most popular resorts for tuberculosis in the East, Asheville, N. C., has an altitude about 300 feet less than Terra Alta. The average annual relative humidity is much alike, but slightly higher in Elkins than in Asheville. Asheville has an average annual percentage of sunshine higher than ours by 14 per cent, which runs rather consistently through the year. Asheville has an annual average of 133 days with rain or snow; Terra Alta, 127.

It will be seen from the above that the climate of Eastern West Virginia and Western North Carolina, are practically the same, save that Asheville is somewhat warmer. Their average winter compares with what we would term a mild winter.

I am not defending West Virginia climate, I see no occasion for that. I wish only to ask every advisor to take stock thoughtfully of our delightful climate before advising changes which may mean most unfortunate consequences. Granting that there are certain climatic qualities which are desirable in physio-therapy, it is to be recalled that on a basis of 100 per cent, if all of those factors which contribute to be a successful cure

or arrest be given their proper apportionment, climate is given only ten per cent.

In the foregoing, I trust that I have made myself as intelligible to the laymen as I have to those of the profession, for, after all is said and done, it is often the casual acquaintance who implants discontent in the minds of patients, unwittingly I am sure. However, such well-meaning friends often grossly exaggerate and otherwise embellish stories which have as their nucleus only a spark of truth.

In conclusion, I wish to emphasize the following points:

1. One should never be advised to change climate unless conditions in total in the new abode are to be as good or better than those left behind.

2. The prognosis for an intractible consumptive is bad.

3. The Southwest is overrun with indigent consumptives.

4. There are occasionally good reasons for recommending a change in climate. There are usually many reasons for advising patients to remain at or relatively near home.

5. Climatically, the mountainous sections of West Virginia compare most favorably with that of North Carolina.

6. If you have the impulse to advise one to go West or elsewhere, think seriously before you give this advice.

GENERAL ANESTHESIA*

By ELDON B. TUCKER, M. D.
Morgantown, W. Va.

"AND THE LORD GOD caused a deep sleep to fall upon Adam, and he slept. And he took one of his ribs and closed up the flesh instead thereof." Thus is described the first case of anesthesia on record. It is certain that attempts to relieve the pain of surgical procedure extend back to remote times.

The ancient Assyrians before performing the operation of circumcision employed digital compression of the carotid arteries to produce insensibility; curiously enough the literal translation of the Greek and Russian term for Carotid is the artery of sleep.

The ancient Egyptians are believed to have used Indian hemp and the juice of the poppy to produce drowsiness before surgical operations and the Hindus evidently knew of several narcotic drugs as early as 977. In 1540 sulphuric ether was discovered by Valerius Cordus, but its anesthetic properties were not recognized until three centuries later. In 1661 Greatrakes produced magnetic sleep, he was followed by Anthony Mesmer in 1766, but it was not until 1843 that an attempt was made to put hypnotism on a scientific footing by James Braid of Manchester. In 1776 Priestly discovered nitrous oxide gas. Humphrey Davy while doing research work in the Institute at Brystol on nitrous oxide, discovered its anesthetic properties. One day during the course of his experiments, having an inflammation of the gums which caused him severe pain, he found that this was completely relieved by the inhalation of the gas. He suggested its use in surgical operations. This suggestion, however, seems to have passed unnoticed, at least it was not acted upon for more than 40 years. Farraday in 1818 drew attention to the fact that the vapor of ether mixed with air produced similar effects to those produced on Humphrey Davy by the inhalation of nitrous oxide.

Dr. Crawford W. Long of Jefferson, Jackson County, Georgia, was led to try the effect of ether during operations and apparently used it with success as early as 1842, but did not make his results generally known. In 1844, Horace Wells, a dentist of Hartford,

* Read before the Monongalia County Medical Society at Morgantown, W. Va., April 6, 1926.

Conn., having witnessed an exhibition of nitrous oxide by a public lecturer, induced him to go to his office and administer the gas to him while a friend, Dr. Riggs, extracted a tooth for him which was troublesome. This was achieved without pain. This occurred December 11, 1844. Wells administered the nitrous oxide in 13 or 14 cases with more or less success and then repaired to the Massachusetts General Hsopital for a demonstration. He made an address on anesthesia and administered the gas for the extraction of a tooth. The experiment was unsuccessful and the whole thing was looked on as a piece of humbug and Wells was hissed out of the room by the students. He later committed suicide by opening his radial artery.

W. T. S. Morton, a previous partner of Wells anesthetized himself September 3, 1846 and remained asleep 7 or 8 minutes. A few days later he extracted a bicuspid tooth under the anesthesia. Later, Dr. Morton was permitted to anesthetize a patient for Dr. Warren at the Massachusetts General Hospital and this was successful. In a very short time ether came into general use. Morton as well as Wells spent much of the later portions of their lives in disputes about priority and Morton died bankrupt in 1868 at the age of 49.

Chloroform (CH CL 3) was discovered by Guthrie and two other men in 1832, but did not come into general use until it was successfully used and reported by Dr. J. Y. Simpson of Edinburgh, in 1847. At first, Chloroform was looked upon as an entirely safe agent, but on January 28, 1848, only 2 months after the introduction it claimed its first victim. This accident was followed by numerous other deaths. Today, Chloroform is rarely used in this country except in obstetrical cases, but it is usually preferred where transportation is difficult and in the tropical countries. It is much used in Scotland, its original home and also in western Canada.

In the United States, the home of ether, and in most other countries, ether holds its place as a routine anesthetic. There are not wanting signs, however, of its being supplanted to a great extent by a mixture of nitrous oxide and oxygen and ethylene and oxygen or its use combined with nitrous oxide and oxygen. Nitrous oxide or "Laughing Gas" did not become popular or come into general use till about 1867.

Physiology of Anesthesia
Absorption of the Anesthetic

It is well known that plants and seeds may be rendered anesthetic by being placed in an atmosphere of chloroform or ether vapor or plants may be watered with chloroform water to produce the same results.

With human subjects we are compelled to administer anesthetics by other methods than this simple one of absorption, the most convenient manner usually being by the lungs through respiration. The vapor of the drug inhaled passes to the air cells. There an exchange of gases takes place and in accordance with the law of "the diffusion of gases" an equilibrium tends to becomes established between the amount of anesthetic vapor in the alveoli and in the blood. From the blood the anesthetic passes to the lymph which carries it to all the tissues of the body. At the beginning of an anesthetic the percentage of vapor must be greater in the inspired air than elsewhere. The absorption of the anesthetic is also greatest at this time. This difference will diminish as the alveolar air, blood and lymph become charged with the vapor; until finally a balance will be reached that will provide just the correct quantity of vapor for steady maintenance of anesthesia. Then the amount given is gradually diminished because the longer a person is under an anesthetic, the less anesthetic is required to keep him under.

It is obvious that increased frequency of respiration will raise the percentage of anesthetic in the inspired air and so in the alveolar air. A deep inspiration also has the same effect provided, of course, that the strength of the vapor administered remains constant.

The relative quantity of anesthetic held by the blood cells and plasma varies with the different anesthetics, but the quantity held by the blood cells is in all cases greater than in the plasma.

Elimination of Anesthetic

On cessation of administration of any anesthetic the procedure is reversed, the alveolar air losing with each inspiration and expiration a portion of its anesthetic vapor. The blood therefore now gradually gives off the anesthetic to the pulmonary air. The time required for complete elimination varies with the different organs of the body and also with the anesthetic. Both chloroform and ether are practically eliminated at the end of seven hours, though minute traces probably remain for a longer time. Chloroform is eliminated very rapidly during the first five minutes after its administration is stopped and half the quantity in the blood is eliminated. Nitrous oxide is probably all eliminated from the body in from 2 to 5 minutes.

The Cause of Narcosis

Various theories have been brought forward from the early days of anesthesia to explain the methods by which unconsciousness is produced. During narcosis there is an increase of fat in the blood probably brought about by the action of the anesthetic on the fatty tissue. It has been shown that the more soluble an anesthetic is in fats and lipoids the more readily it produces its effects.

Oxidization of the nerve tissue and cells is decreased or prevented entirely according to the depth and duration of the anesthesia. Although other changes may occur, the factor which produces the characteristic symptom complex of narcosis is under *all circumstances the suppression of the power to carry on oxidization.*

Recuscitation

In general, the heart in death from anesthesia is almost invariably found stopped in extreme dilatation. This would indicate that anything that would cause the heart to contract should be used. Artificial respiration of some type is therefore indicated at once. A few cases have been saved by massage of the heart produced by use of the hand in the abdomen making pressure through the diaphragm or by cutting into the heart through the ribs to the left of the sternum. In case the patient is being given a gas anesthetic he should be given artificial respiration with pure oxygen from the gas machine, in fact, he should be receiving pure oxygen before his heart stops. Two, or three breaths of oxygen, the operator producing expiration by the Sylvester method, will be all that is usually necessary. The artificial respiration should be kept up no matter what else is done. An intravenous solution of normal saline with ten to twenty minims of adrenalin to the 100 cc. should be started at once. Adrenalin may also be given into the heart itself. Other drugs such as caffeine and sodium benzoate, strychnine sulphate, camphor in oil, or atropine may be tried, but they will do no good, unless the heart is beating. Recently Alpha-lobalin has been highly recommended as a respiratory stimulant. The circulation must be restored in 7 to 8 minutes or too much degeneration takes place in the brain for permanent results to be obtained. The duty of the anesthethist is to remain at the patient's head to see that the air passages are open to hold the head back so that the tongue will not be swallowed, to give oxygen with the gas machine and to direct the other methods of resuscitation which are being carried out along with the surgeon.

Ether

We will discuss the four general anesthetics which are being widely used, ether, chloroform, nitrous oxide, and ethylene. The important fact about ether which should be kept in mind is, that its vapor is highly inflammable and is explosive when mixed with air in the right proportion.

The various methods of ether administration are by:

1. The open system.
2. The Semi-open system.
3. Closed or rebreathing system.
4. With oxygen.
5. With nitrous oxide and oxygen.
6. Intravenous.
7. Rectal.
8. Intratracheal.
9. Intrapharyngeal.

We will consider simply the open system or modification of the open system as it is only possible to use the open system in very young children up to 2 or 3 years of age.

The so-called open system which is now used extensively and which we use, consisting

of an Esmarch's or Yankauer's mask covered with 6 to 12 layers of gauze or its equivalent, is not strictly an open method. In fact it is usually found necessary, except in children, to adopt a means of partially excluding the air by means of towels wrapped around the base of the inhaler.

Many who have adopted this method make use of a preliminary dose of 1 or more of the narcotic alkaloids, such as morphine, atropine, hyoscine or scopolamine. These undoubtedly lessen the dose of ether required but have certain disadvantages. We make it a habit to give the average sized patient who is going to take a straight ether anesthetic one-fourth grain of morphine sulphate and 1/150 gr. of atropine sulphate, or one-fourth gr. morphine sulphate alone, one-half to 1 hour before operation. These drugs should be given hypodermatically in dosage according to the weight of the patient.

I will now give you my technique for an ether anesthesia. The anesthetic stand is ready. There are on it gauze, towels, pus basin, tongue forceps, breathing tube, hard rubber screw for opening jaws, an emergency hypodermic outfit, wet strip of cotton, safety pins, pen, anesthesia records, watch, an ether mask, and plenty of ether. I inquire into the condition of the patient's heart or usually examine it myself. I count the patient's pulse and and respiration, take the blood pressure if the operation is laparotomy or if the patient's condition is serious, and record them, strap the patient down, apply the damp cotton over the eyes, talking to the patient most of the time. It requires 10 to 15 minutes to anesthetize the average patient. The mask is held 3 to 4 inches above the patient's face, the ether is dropped slowly upon the mask, the chin being held up and back by the left hand, which hand also holds the mask and can be used to count the pulse. The mask is gradually lowered so that at the end of 5 minutes it is practically always down to the face, but not tight down. If there is any choking or coughing it is removed or less ether dropped temporarily. By the end of 10 minutes I am placing a towl around the mask. I do not put it all the way round at once because it would cut off too much air. The towel is pinned in place. Of course, all along I am watching the various signs of anesthesia which signs I will speak of later. However, will say that about the time the towel is applied, the patient is in the stage of excitement or immediately goes into that stage. The ether is now forced for 1 or 2 minutes to hasten the patient through this stage. The head is also turned toward the right side at this time to prevent the tongue from dropping back and obstructing the upper air passages. In 2 to 5 minutes the patient is ready for the operation to begin.

Stages of Anesthesia

There are usually four stages, sometimes five. There is no definite line of demarcation between these various stages, but a gradually passing from one to another of them.

First Stage or Stage of Light Anesthesia

This stage usually occupies the first two minutes of the inhalation, but according to our technique it may be said to occupy the first 5 to 7 minutes of the inhalation. Respiration is accelerated, the blood pressure is slightly increased, the pulse is full and bounding and the color reflex is heightened. If the vapor is administered in too great a concentration, there may be holding of the breath, swallowing, closing of the glottis, a feeling of suffocation, muscular rigidity, coughing and turning of the head from side to side. The pupils are dilated. The special senses are disturbed, though the order in which thev are affected has not been definitely determined.

Second Stage or Stage of Excitement

With ether as with chloroform, this stage, so far as the excitement is concerned, should not occur. In any event this stage is marked by the more or less abrupt loss of consciousness, with the consequent interference with memory, volition and intelligence. The subject, however, responds to stimulants, and may give evidence of apparent consciousness. Words and sentences become more incoherent and crying, singing or laughing, shouting and struggling may indicate a typical stage of excitement. As the anesthesia deepens, marked rigidity of the muscles, clonic or tonic contractions, particularly of certain muscles ensues notably, the muscles of the jaw, and larynx. The pupils continue to be dilated and mobile. Mucus and saliva are

now freely secreted. The face is flushed, and unless care is exercised in keeping the airway clear cyanosis may appear. Perspiration now appears over the face and other parts of the body. The pulse is still accelerated, full and bounding. Respiration may now become irregular and apnea may occur. The cessation of breathing lasting for a variable length of time. The "Ether Tremor" to which reference has been made, sometimes occurs during this stage, the patient shaking with quite noticeable violence. This is more apt to occur as the subject is emerging from than when going under the influence of the anesthetic and in either event this phenomonen disappears with the deepening of the anesthesia. Vomiting occurs, if at all, during the transition from the second to the third stage. The muscles, particularly concerned in respiration are now no longer subject to reflex stimulation, and as the subject passes into the third stage, they become so flaccid that there is no longer danger of serious interference with respiration from this cause.

Third Stage or Stage of Surgical Anesthesia

The recognition of this stage of anesthesia is important, inasmuch as the subject is not in condition for operative interference until this time. The indication of normal surgical anesthesia may be briefly stated as follows:

1. Respirations regular, deep and softly stertorous.
2. Muscles of the extremities lax.
3. Color of face, ears and lips about normal.
4. Pupils react to light.
5. Lid reflex weakly present.
6. Coughing reflex absent.
7. Phonation absent (musical).

The respirations are now regular, full and generally audible. A soft stertor may be considered normal, but if breathing becomes strongly stertorous it is an indication of some obstruction in the airway. The respirations are along with the pupillary reflexes, the principal guide as to the depth of narcosis. When the regular automatic respiratory action is obtained, this should be maintained, bearing in mind slight variations in different individuals. A decrease in the depth and amplitude of respiration indicates a return to consciousness, and calls for an increased amount of the anesthetic. An increase in stertor should be modified by changing the position of the lower jaw or head, or by inserting a breathing tube. Cyanosis is not present in a normal ether anesthesia.

During this stage the heart action is accelerated, compared to the normal, and the pulse is full, bounding and regular, usually varying from 80 to 100 per minute. As the anesthesia progresses the face may become more flushed than normal. Blood pressure as a rule remains constant.

The pupils when no preliminary medication is used, may be slightly dilated or may contract to normal, remaining so throughout this stage. The eyeballs are generally on center though they may be rolling.

Relaxation of all the muscles now occurs, the continuance of this stage depending upon the further conduct of the administration.

The third stage of anesthesia may change in the direction of:

1. Return to consciousness or
2. Deepening narcosis, or the beginning of the fourth stage.

The indications of returning consciousness may be summarized as follows:

1. Shallow respirations.
2. Pallor of face.
3. Swallowing movements.
4. Dilated pupils.
5. Return of lid reflex.
6. Excessive Lachrymation.
7. Return of Phonation.

These phenomena call for an increased amount of the anesthesetic.

Fourth Stage or Stage of Deepening Narcosis or Overdose

The indications of the onset of this stage may be summarized as follows:

1. Weak respirations.
2. Dusky appearance of the face, cyanosis.
3. Soft, feeble, irregular pulse.
4. Dilated pupils with reaction to light.
5. Eyeballs with fixed and dry eyelids separated.

The first indications of impending overdose ordinarily noted by the administrator, are the irregular pulse, and the quite feeble respirations. The respiratons may become irregular and even Cheyne-Stokes in type.

The muscles become flaccid and blood pressure is markedly decreased. When ether is given in an overwhelming dose, the heart may be paralyzed immediately after paralysis of respiration. However, this does not often occur. The heart usually continues to beat for some time and if this stage is recognized and proper methods of resuscitation are used the patient is brought back into the stage of surgical anesthesia. However, accurate diagnosis of the stage of anesthesia is essential as resuscitation may be put off too long.

Chloroform—Properties

Chloroform is a colorless, transparent, mobile, volatile liquid; with a pleasant penetrating odor and a sweet fiery taste. Its vapor is not combustible alone.

In this part of the country chloroform is rarely used except in obstetrical cases and occasionally for children. However, it is still used quite extensively in the South.

In general we may say that the patient passes through the same stages under chloroform as under ether. However, the patient goes to sleep much more rapidly, breathes more quietly, is less likely to have an excitement stage, remains more pallid and rarely becomes cyanotic under chloroform. The greatest care must be exercised in the early stage of induction the same as with nitrous oxide, because if a few deep inspirations are taken or too many are taken, the heart becomes paralyzed and the patient dies before reaching the stage of surgical anesthesia.

For a general anesthesia chloroform should be given with a Skinner's or Esmarch's or Ochner's large size mask. Less gauze should be used on it than on the ether inhaler. It should be held well above the face and the chloroform should be dropped very slowly. When 1 square inch of the gauze is moistened the patient is getting about 1 per cent of the vapor. If the entire mask is moistened he is getting 4 per cent vapor. This mask should not be held down tightly over the face and should never require a towel around its edge. In other words you want the patient to get as much air as possible with a chloroform anesthetic and as little with an ether anesthetic as possible. The patient recovers much more rapidly from a chloroform anesthetic than from ether.

In obstetrics chloroform is used for it's analgesic effect, it being used intermittently for the pains as they appear. A mask, a towel or a Bennet inhaler may be used. From 2 to 5 drops are applied to the mask or placed in the inhaler and the patient is told to breathe, the mask being held fairly close to the face. The patient may call for the chloroform at the beginning of the pain or the obstetrician may tell the anesthetist when to give it, as he can usually feel the uterus contract before the patient feels the pain. As the head is being born the anesthetic may be used continuously so that the patient loses consciousness just as the pains become the most severe.

There appears to be a wide spread belief that chloroform is much safer in children than in adults, but this is not borne out by experience. The danger from anasthesia is somewhat greater in young children and infants and in the aged than it is in the average adult. It is much more dangerous than ether.

Nitrous Oxide

Nitrous oxide, otherwise known as nitrogen monoxide, peroxide of nitrogen or Laughing Gas, has a chemical formula N20. It was first prepared by Priestly in 1772. When pure it is devoid of irritating properties. It has a sweetish taste and is respired without discomfort in nearly all cases.

Administration

Nitrous oxide was originally administered alone and could only be used for short operations. Now it is given along with sufficient oxygen to carry on oxidation and it may be given for an indefinite length of time. The signs of anesthesia and the danger signals must be observed much more accurately and rapidly under gas anasthesia than under ether or chloroform.

Technique or Induction

Unless there is a marked respiratory or circulatory embarrassment, anesthesia should be induced by administering pure nitrous oxide without a trace of oxygen. For this purpose the mixing valve on the McKesson machine is set at 100 per cent nitrous oxide,

the mask applied and inhalations continued until by the changed character or rhythm of the respiration it will be noticed that the patient has lost consciousness. Other signs which may be exhibited at this moment may indicate that the patient is not in normal anesthesia. At this moment, however it is necessary to begin the administration of a small percentage of oxygen, while carrying the patient on to light or normal anesthesia as the case may be. The valve is then set for 4 or 5 per cent oxygen while the patient continues to breathe and while you are continuing the process of saturation. Between the 15th and 30th breath the patient will usually exhibit signs requiring a larger percentage of oxygen in the mixture. But unless the signs are allowed to become urgent the oxygen be increased but 1 or 2 per cent at a time as required.

It may be necessary at any moment to give a large percentage of oxygen even up to 100 per cent, to overcome the development of a group of signs indicating a too profound narcosis, but care should be exercised that in so doing not more than 1 or 2 breaths of this high percentage of oxygen be administered, since most of the progress made toward anesthesia should be undone and one would have to start over with pure nitrous oxide to bring the patient back to the stage of anesthesia just accomplished. Within 2 to 3 minutes a mixture should be found which will hold the patient in a normal plane of anesthesia; after which narcosis may be continued indefinitely.

Morphine premedication should usually be given one-half to 1 hour before the beginning of a gas anesthesia.

Nitrous oxide is now being used quite extensively. It has been used in dentistry for many years with success. In obstetrics it is the most pleasant anesthetic used and one that is very greatly appreciated by the patient. The technique is about the same as for the use of chloroform in obstetrics, except that gas must be given through a machine. The machine is set for 10 per cent oxygen and 90 per cent nitrous oxide. The patient takes 3 or 4 inhalations at the beginning of each pain. The pain comes on but the patient is scarcely able to perceive it. The sharp edge is taken off. This mixture is administered continuously as the head is being delivered the patient losing consciousness at this time.

Comparison With Other Agents "Gwathmey"

"In the earlier period of nitrous oxide history, this agent was hardly comparable with other inhalation anesthetics, inasmuch as it was not considered a true anesthetic. With modern methods, however, this no longer holds. Nitrous oxide is considered as truly an anesthetic as is ether or chloroform. Given with oxygen it ranks above ether so far as safety to life is concerned. In point of after effects it takes precedent over all other agents, since it is practically free from sequelae, if administered with a fair degree of care. Nitrous oxide and ether, with enough oxygen to prevent cyanosis, is the safest inhalation anesthetic, both as to life and after effect."

Ethylene

The newest gas to receive widespread popularity as a general anesthetic agent is Ethylene (C_2H_2). It is a colorless gas with a peculiar sweetish odor. It works quickly and works very much like nitrous oxide. However, it has some advantages and some disadvantages.

It's advantages are:

1. Ease of induction and rapidity of recovery.
2. Relaxation without cyanosis.
3. Absence of sweating.
4. Absence of respiratory irritation.
5. Narrow anesthetic margin.

It's disadvantages are:

1. Explosibility and inflammability.
2. Objectionable odor.
3. Slightly increased oozing at time of operation.

Surgical Shock

This is of paramount interest to the anesthetist, as it may occur, in varying degrees, during the progress of an operation, under anesthesia or even be present to a greater or less degree before commencement of anesthesia. When the condition arises during the progress of an operation the anesthetist is the one in a position to note the earlier evidence of approachng trouble and on him devolves the responsibility of taking

the necessary steps to counteract this undesirable condition, the other members of the team being fully occupied with the operative procedures which it is important should not be in any manner disturbed or delayed; the more so when the condition is likely to become critical.

The cause of the so called condition of shock is not yet definitely understood. It may be produced in a variety of ways. Hemorrhage may bring about the condition. Another cause is stimulation of nerves. Rapid respirations, deficiency of CO2 in the blood may cause it. Exposure of large areas of the intestines is a causative factor. Rough manipulation is another. Long operations is another.

It is evident then that shock, as known by the usual symptoms of pallor, cold perspiration, weak respiration, lowering of blood pressure, etc., may be brought about in various ways and may vary considerably in degree. The more serious cases are fortunately rare and one is called upon only as a rule to treat the milder aspects of this condition. It is up to the anesthetist to tell when this condition is coming on. It may happen in the unexpected case due to sudden severe hemorrhage. It is also up to the anesthetist to do all in his power to combat it when it first appears. He must be on the alert all of the time. The taking of the blood pressure during the operation is the surest and most accurate way of detecting this condition early. While the normal ratio of pulse pressure to diastolic pressure is as one to two, in surgery there are many cases in which these ratios have been disturbed before the patient comes to operation. It is the duty of the anesthetist to keep these ratios as favorable as possbile and to counteract depression as much as may be.

Surgery is rarely beneficial to the organism at the moment of its performance; it may be considered as always depressing. The anesthetic comes also in this category, all known anesthetics, in the dosage required for surgical anesthesia being more more or less depressing.

Clinically we may divide depression into three stages or degrees by the pulse-blood pressure reactions or relations.

First Stage

This is characterized by either a small increase in pulse rate without a corresponding increase in systolic pressure, or a small decrease in blood pressure without a decrease in pulse rate. This degree is commonly observed in major operations. It is not dangerous, but of prognostic value.

Second Stage

This is usually characterized by an increase in pulse rate and a decrease in blood pressure amounting to 25 per cent or more of each. This stage is regarded as dangerous and is the signal for the anesthetist to have restorative measures ready for immediate use should it merge into the third stage. In some instances, at least, treatment should be started at this time, and the surgeon should always be advised so that he may be prepared to modify his operation if it becomes necessary.

Third Stage

This is a further depression of the second and in the adult is characterized by a progressively increasing pulse rate above 100 and decreasing blood pressure below a systolic of 80 mm and a pulse pressure of 20 mm or less.

Treatment

Should be about the same as given under resuscitation. However, the bad risk should have proper pre-operative care. Large amounts of fluids are indicated. The intestinal obstruction case should have fluids and sodium chloride in large amounts. If the heart is weak the patient should be digitalized in advance. The diabetic should be given insulin and glucose before the operation.

Relative Danger

Statistics as to the relative safety of nitrous oxide, ether, chloroform, etc., are open to grave fallacies. Many deaths from anesthesia are doubtless not reported and it is only in institutions where reliable statistics are kept that we can obtain any accurate data. The following are in general accepted as the relative death rates of the various anesthesics—used (by Webster):

Nitrous Oxide, 1-20,000; Ether, 1-16,000; Ethyl Chloride, 1-10,000; Chloroform, 1-3,000; Spinal Analgesia, 1-500.

MEASLES*

By D. BERMAN, M. D.
Moundsville, W. Va.

THE subject of this paper deals with the complications, sequela and prophylaxis of the familiar and much discussed disease, measles. It may seem to many an unnecessary rehashing of a disease so familiar and one unfortunately so lightly regarded by the laity and many of our own profession that the attitude is dangerous and consequently productive of regrets.

Brevity of expression is the means by which an idea is best conveyed to the listener. But there may be times when enlargement of the topic under discussion by many important facts, may be a more effective method of impressing the importance of the matter under discussion. In my opinion, the present epidemic of measles in our country is just such an occasion.

It will not be amiss to begin with a brief account of the malady before proceeding to discuss its later course.

From the clinical course and the latest researches by Dr. Tunnicliff, it is believed to be a streptococcic septicemia, caused either by a diplococcus or a very short streptococcus. Dr. Tunnicliff found an anaerobic green producing, bile soluble diplococcus constantly present in the blood in early cases of measles and she has, at the same time isolated it from the conjunctiva, the nasal mucous membrane and the tonsils. With this organism she produced what she considered to be measles in rabbits. For estimating immunity she has utilized a toxic substance produced by the diplococcus in broth, in the same way as the Shick test is used, with apparently accurate results. She also claims that the toxin made by the organism is neutralized by the blood of a convalescent patient.

As in any other septicemia, the entire organism is affected as is manifested by the skin, respiratory tract, alimentary canal, circulatory and nervous systems.

After an incubation period, usually fourteen days, but varying from seven to twenty-two days, the period of invasion is ushered in by severe coryza, a hard brassy cough, suffusion of the eyes, increased lachrymation, photophobia, sneezing, and a discharge from the nose. There is a moderate soreness of the throat, and congestion of the tonsils, fauces and pharynx. There is an eruption of small red spots on the hard palate. Koplik's spots on the mucous surfaces of the cheeks and white spots on the lachrymal caruncles are additional signs. The spleen is palpable in the vast majority of cases.

The eruption is by now so well known that it needs no description. It is of an inflammatory character with an exudation of serum, red cells and leucocytes, into the corium and epidermis. The exudation and edema cause the puffiness of the skin.

The local and constitutional symptoms reach their maximum severity with the full development of the rash. As the rash fades the temperature declines and the catarrhal symptoms subside. A day or so after the cessation of the fever, the rash fades and the patient is convalescent. Complications arise during the course of the disease, varying in character and frequency in different epidemics, but the chief, or captain of the men of death, is pneumonia.

Involvement of the respiratory system is a constant feature of the disease and it is the age, resistance and care given the patient which determine the development of a pneumonia. Lobar pneumonia is rare and practically all are of the lobular type. Bronchitis and tracheitis can scarcely be called complications as they accompany every case of measles.

The usual catarrhal laryngitis may be se-

* Read before the Marshall County Medical Society at Moundsville, June 8, 1926.

vere and may be confused with the membranous types. Membranous laryngitis ranks next to pneumonia as a cause of death in older children. Developing at the height of the disease it is often due to the streptococcus, but when it develops later it is usually caused by the Klebs-Loeffler bacillus. The streptococcal laryngitis may be as serious as the diphtheritic, as it almost certainly develops into broncho-pneumonia. Differentiation is made with certainty only by means of a culture.

In the throat a catarrhal angina is part of the disease. There is acute congestion of the tonsils, palate, uvula and pharynx. Often membranous patches are seen. In measles, extension is more likely to be towards the larynx, while extension to the ears is more generally the rule in scarlet fever. True, diphtheria frequently complicates measles in the later stages.

When we consider the fact that practically all of the mucous surfaces of the body are involved in measles it is not surprising to find diarrhoea as a frequent complication. In the summer it may be even more serious than the respiratory complications. All types may be met with, including dysentery, which is more frequent in patients under two years of age.

Cancrum Oris is rare but sometimes occurs in institutions. It is almost invariably fatal.

Otitis is frequent in some epidemics and rare in others. Fortunately, in ours it is comparatively rare. The otitis of measles is usually less serious than that of scarlet fever.

The catarrhal conjunctivitis is met with in nearly every case. In poorly nourished children there may occur ulceration of the cornea.

Measles in a child with active or latent tuberculosis is very serious and in many is a terminal infection.

It can scarcely be said of any disease affecting man, that upon its termination, the body is left in as sound a condition as before. All diseases leave a scar somewhere, be it an actual organic lesion or a diminution of resistance to other infections. Especially is this true of the septicemias and when it is fully realized that measles is a streptococcic septicemia affecting the entire economy, then it may be seen that aside from the peculiar pre-disposition to tuberculosis which we know that it produces, there may be many other sequels which become apparent as time goes on. Measles leaves the patient for a time in a delicate condition, in which resistance to respiratory diseases is markedly lowered. There is not a man here but who has heard that the chronic cold which he has just diagnosed as tuberculosis has lingered on since the attack of measles. A great predisposition to the contraction of whooping cough is left by measles.

Nephritis, Osler says, is less rare than stated, and it is not very uncommon to see cases of chronic nephritis which date from an attack of measles.

I now come to that phase of the subject in which, by virtue of my work, I am most interested, namely, prevention. In the Dark Ages and until comparatively recent times, the eruptive fevers, such as measles, were regarded by both the laity and the profession as a sort of necessary, vital crisis, peculiar and appropriate to childhood—a sort of sweating out and erupting of "peccant humours" of the blood which must be got rid of or else the individual would not thrive. It is a harking back to the good old days of ignorance when we hear such expressions as "bringing out the rash" or "might as well let the child get the measles and have done with it."

With the advent of bacteriology and the modern understanding of infection, these old views of the necessity of undergoing infection have changed. But practically, the hold these views have on the mind of the laity and the improperly trained, the unscientific and the slouchy members of the profession, is one of the most serious and vital obstacles in the way of the health officer when he tries to attack and break up an epidemic of measles, whooping cough, or chicken pox.

Measles is the most highly communicable, epidemic, eruptive fever of childhood. It is comparatively mild and though the case rate is high, and the case mortality low, the total number of resultant deaths throughout the country is fairly staggering. Measles as a cause of death ranks fifth and the saddest

feature of this fact is that practically four-fifths are preventable and therefore, the responsibility of prevention rests on the shoulders of our profession. I will here quote a passage from Woods Hutchinson's book, Preventable Diseases:

"One of the English commissions which was investigating alleged physical deterioration of city and town populations stumbled upon a singularly interesting and significant fact in this connection, while plotting the curves of the rate of growth of the children in a given district in Scotland during a series of years. They were struck with the fact that children born in certain years in the same families, neighborhoods, and presumably the same circumstances, grew more rapidly and had a lower death rate than those born in other years; and that, on the other hand, children born in other years fell almost as far below the normal in their rate of growth. The only factor which they found to coincide with these differences was that in the years in which those children who made the slowest growth were born there had been unusually heavy epidemics of children's diseases and a high mortality; while, on the other hand, those years whose "crop" of children made the best growth had been unusually free from such epidemics and had a correspondingly low mortality, showing clearly that even the survivors of children's diseases were not only not benefitted, but distinctly handicapped and set back in their growth by the energy, so to speak, wasted in resisting the onslaught."

Thus it may be seen that in addition to the loss of so many of our future citizens, there is also a very appreciable deterioration of the health and efficiency of such a great part of each generation.

Can any thinking and scientifically trained ed man come to any conclusion other than that our public health organization is weak somewhere? By this organization I mean the health authorities, the profession and the man at large. In my opinion the weakness lies in the fact that during an epidemic we hesitate to make an early diagnosis on the prodromal symptoms before the appearance of the rash although we are morally certain that it is measles. Secondly, that we do not insist on the isolation of the suspect during a period when he is most highly infectious. Thirdly, we are tardy in notifying the health authorities. Fourthly, we have as yet to educate the people to the necessity of early notification, isolation, proper carrying out of quarantine and concurrent infection.

I am indeed glad to state that in our own county our profession is fully awake to the needs of the moment and the excellent co-operation of the physicians with the department reflects great credit on the status of the profession. We must realize once and for all that measles is an infection just like small pox, though we do not treat measles with the same respect and therefore, we pay with a death rate twenty times that of small pox.

A new case of measles arises from contact with another and if we effectively cut off the source of infection by the simple means outlined before, it follows that we prevent others from contracting it. At first it may seem futile to many to attempt the eradication of measles, but with education of the profession and of the people and the unselfish devotion of the profession to the cause of humanity, this can be accomplished as has been done with small pox, malaria or cholera, despite old theories, prejudicies, superstitions, and ignorance that lay in the path of the great pioneers of our profession.

With education and advancement in science and preventive medicine, the indifference with which measles has been treated becomes morally and actually criminal, and "He who runs may read," that "The old order changeth, yielding place to the new."

TREATMENT OF ILEUS BY CHOLINE

Drs. C. G. L. Wolf and J. R. C. Canney, of Cambridge, England, report four cases of post-operative paralytic ileus, three of which were successfully treated with choline, *i.e.*, a substance isolated by Le Heux from Ringer's solution in which a piece of isolated intestine has been allowed to contract for some time. Choline is put up in glass ampoules containing 600 mgms. in 6 ccm. This is diluted with 180 ccm. of sterile normal saline, and injected intravenously, taking at least 17 minutes to inject the whole quantity. (*The Lancet*, April 3, 1926.)

SHOE DYE POISONING--Report of a Case

By C. A. RAY, M. D.
Charleston, W. Va.

P. J., age 22, athletic in appearance, no past history of illness, clerk in wholesale hardware store, applied a heavy coating of ..... shoe dye to a pair of tan shoes without having removed the shoes from his feet. He immediately entered his automobile and started to Charleston, 35 miles from his home on a business mission.

Twenty minutes later he began to have pains in his feet and legs of such severity that he was obliged to remove his shoes. He began to have headaches and an hour later, noticed that his lips were blue. When he reached my office about three hours after his first symptom he was much excited and nervous. His lips, ears and nails were black and his skin was a purplish black.

Examination disclosed temperature 98; pulse 120; respiration 30; blood pressure, systolic 130 m., diastolic, 60 m., soft systolic murmur at the apex. Leucocytes 12,-500, red cells, 4,800; and color index above 130. Pupils normal in size and reaction. Urine normal. No history of having taken any kind of a drug or beverage or suspicious food.

Careful physical examination disclosed nothing else except a scar on one hand and two black spots on one foot the size of a silver dollar.

He was placed in bed, heat applied to body and stimulates administered. Twelve hours from the beginning, the cyanotic appearance began to disappear and at the end of 24 hours he was entirely cleared up and able to leave the hospital. His mind was clear throughout the attack.

Subsequent examinatons of the blood and urine showed no departure from the normal except the increase in leucocytes.

We have not been able to learn the chemical composition of the dye, but the symptoms were that of an aniline known as Nitro-Benzol.

COCAINE IN STRICTURES OF URETHRA

H. L. Attwater, M.Ch., F.R.C., Assistant Surgeon to All Saints' Hospital, London, says that whilst cocaine is an admirable local anesthetic when injected beneath the epithelium, is not good when applied to a mucous surface, as it lacks penetrating power. A 2-4 per cent solution of cocaine is the only local anesthetic possessing this power to a satisfactory degree, but its dangers negative its use except under special conditions. Fortunately, if the cocaine is combined with sodium bicarbonate, it is possible to obtain a solution which is of such low concentration that, in an experience of its use extending over many thousands of cases, the author has never seen a single unpleasant symptom. The solution is a 0.5 per cent solution of cocaine hydrochloride with a similar concentration of sodium bicarbonate, and it is a matter of standard routine to use it on every case in which it is proposed to pass instruments through the urethra. It gives all the anesthesia that is required. Recently borocaine has been tried and the results are so far encouraging. (*The Lancet,* March 13, 1926, p. 574.)

THE WEST VIRGINIA MEDICAL JOURNAL

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS

J. HOWARD ANDERSON, Marytown — WALTER E. VEST, Huntington — CHARLES W. WADDELL, Fairmont — HARRY M. HALL, Wheeling

THE JOURNAL issued on the first of each month. Entered as second-class matter, January 1, 1926. Acceptants for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Authorized July 24, 1919.

Subscription to Members	$2.00 Per Year
Subscription to Non-Members	$3.50 Per Year
Single Copies	35 Cents

OFFICERS

President:
J. R. BLOSS ..... Huntington
President-elect:
CHESTER R. OGDEN ..... Clarksburg
First Vice-President:
R. O. ROGERS ..... Bluefield
Second Vice-President:
H. C. SKAGGS ..... Montgomery
Third Vice-President:
D. A. MACGREGOR ..... Wheeling
Treasurer:
HUGH G. NICHOLSON ..... Charleston
Executive Secretary:
MR. STERRETT O. NEALE ..... Charleston
Delegate to A. M. A., 1926:
J. R. BLOSS ..... Huntington
C. R. OGDEN, *Alternate* ..... Clarksburg
Delegate to A. M. A., 1926-27:
H. P. LINSZ ..... Wheeling
R. A. ASHWORTH, *Alternate* ..... Moundsville

COUNCILORS

First District:
H. P. LINSZ, (1-year term) ..... Wheeling
C. G. MORGAN, (2-year term) ..... Moundsville
Second District:
C. H. MAXWELL, (1-year term) ..... Morgantown
C. H. HALL, (2-year term), ... Elkins
Third District:
JOHN FOLK, (1-year term) ..... Bridgeport
C. R. OGDEN, (2-year term) ..... Clarksburg
Fourth District:
J. E. RADER, (1-year term) ..... Huntington
W. E. VEST, (2-year term) ..... Huntington
Fifth District:
J. H. ANDERSON, (1-year term) ..... Marytown
H. G. STEELE, (2-year term) ..... Bluefield
Sixth District:
R. H. DUNN, (1-year term) ..... South Charleston
C. A. RAY, (2-year term) ..... Charleston

¶ All original articles for THE JOURNAL must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

¶ Our readers are requested to send marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

¶ It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

¶ Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

¶ Advertising forms will go to press not later than the tenth of each month. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

¶ Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, 303 Professional Building, Charleston, W. Va.

STANDING COMMITTEES

Medical Defense Committee

H. P. Linsz, Wheeling; C. R. Ogden, Clarksburg; C. G. Morgan, Moundsville.

Committee on Scientific Work

G. H. Barksdale, Charleston; O. D. Barker, Parkersburg; D. A. MacGregor, Wheeling, Scientific Secretary.

Public Policy and Legislative Committee

C. A. Ray, Charleston; G. A. MacQueen, Charleston; R. H. Walker, Charleston; James McClung, Richwood; J. R. Bloss, Huntington; D. A. MacGregor, Wheeling.

Committee on Hospitals

Robert J. Reed, Wheeling; B. H. Swint, Charleston; R. J. Wilkinson, Huntington.

Committee on Professional Relations

J. R. Shultz, Charleston, chairman, (3-year term); H. G. Nicholson, Charleston, (1-year term); H. R. Johnson, Fairmont, (2-year term); A. G. Rutherford, Welch, (4-year term); W. R. Goff, Parkersburg, (5-year term).

Surgical Section

E. Bennette Henson, Charleston, chairman; W. R. Goff, Parkersburg, secretary.

Eye, Ear, Nose and Throat Section

T. W. Moore, Huntington, chairman; R. A. Tomassene, Wheeling, secretary.

Woman's Auxiliary Officers

President, Mrs. A. G. Rutherford, Welch; *First Vice President*, Mrs. W. H. St. Clair, Bluefield; *Second Vice President*, Mrs. J. P. Lilly, Morgantown; *Secretary*, Mrs. C. M. Scott, Bluefield; *Treasurer*, Mrs. C. A. Ray, Charleston.

EDITORIAL

FRAUDULENT ADVERTISING

The medical profession will watch with interest the movement of the Federal Trade commission to prosecute fraudulent advertisers. A test case now is pending in the courts which was brought by the commission against a popular magazine. If the courts sustain the commission, the opinion will have far-reaching effect and should serve to curb the activities of those publishers who accept advertising indiscriminately and without investigation.

According to William E. Humphrey, federal trade commissioner, in a recent address before the National Petroleum association in Atlantic City, there are a number of publications that "will publish any advertisement for money, regardless of truth, honesty or decency." In outlining the new policy of the commission, Mr. Humphrey declared that the people are being robbed of half a billion dollars annually through fake advertisements. Let us quote a portion of his address:

> "The people of this country are annually robbed of hundreds of millions of dollars through these fake advertisements, most of which are plainly false and known to be so by those who take money for their publications. Some of the glaring instances of this class of fake advertisements are the various 'anti-fat' remedies, medicines, soaps, belts, and other articles—all of them fakes and all of them dishonest, and many of them harmful. Patent medicines for incurable diseases, that are frequently injurious, and often, by holding out false hopes, keep the victim from real help until too late. Beauty creams and lotions and cosmetics, that improve the pocketbook of the faker if not the complexion of the user. Fake industrial schools, holding out alluring promises of lucrative employment. All these prey upon the weak and unfortunate, the ignorant and credulous. There is no viler class of criminal known among men than this. And what of the publisher that for hire publishes these fake advertisements, knowing them to be false? He is equally guilty with the principal. He shares in his ill-gotten gains. He acts from the same motive. If, in any degree he differs from the principal, it must be one degree lower for his chances of punishment are less, and his responsibilities greater."

The foregoing was presented to the petroleum association September 17. On February 12 of this year, the executive secretary of the state association appeared before the West Virginia Publishers' associaton in Wheeling and urged careful censorship of patent medicine advertising. In the course of his talk he said:

> "How many of you have endeavored to censor the advertising submitted by the quack and charlatan to protect your public's health and welfare? You would refuse the advertising of a bucketshop, seeking to sell your public fake stock or gold brick bonds—you protect your public there, but which is more important: Inviting your readers to buy fake remedies or fake stock?
>
> "There should be restrictions placed upon the fraudulent advertising claims of certain proprietary or patent medicine manufacturers. Many of the more progressive newspapers of the nation are refusing this business. * * * Every precaution is taken in the news departments of your papers to verify all facts before they are published. This protects the publisher from libel suits. Such sound judgment should be exercised in your advertising columns."

The secretary suggested that publishers, before accepting proprietary manufacturers' advertising, refer to the bureau of investigation of the *Journal of the A. M. A.*, for a report on the product before accepting the business.

Mr. Humphrey says the trade commission hopes and expects to "put most of this vast array of crooks and parasites out of business." He says that it can not be done in any way except by stopping publication and circulation of false advertisements. In conclusion, he says:

> "We consider this one of the most important actions that has ever been undertaken by any governmental agency. In this fight we want and expect the help of every reputable and honest publication. In this fight we want and expect the help of every decent and honest citizen."

It is our forecast that all of the medical journals of the United States will support Mr. Humphrey and the commission in the war to exterminate "the fleet and cunning crooks that engage in this business." It is

hoped that every medical man will lend his moral support.

After all, it is the family practitioner who knows the thousands of tragedies wrought by fake remedies. He also has seen his family newspaper declare itself for *"Truth in Advertising"* on one page and then, on the next, print a lurid account of how Mrs. John Henry Doe was cured of cancer by a fake medical preparation.

He knows conditions because he attended Mrs. John Henry Doe in her dying hours.

TETANUS:—PROPHYLAXIS

To Pasteur's and Koch's experiments in Bacteriology, and to the genius and experimentations of Ehrlich and of Metchnikoff we are indebted for the establishment of the sciences of immunology and serology. Thus, we have Tetanus antitoxin, one of the most powerful weapons in the prevention and treatment of disease. Those of us who have seen even a single case of well developed Tetanus, I venture to say, never wish to see another.

Tetanus being a preventable disease, we of the Medical Profession, should know it only as a text-book picture. Modern Medicine today leans strongly towards prevention rather than the cure of disease. Prophylaxis is the all important thing, and so with the disease Tetanus—we must prevent.

In West Virginia we probably have in the course of one year as many patient candidates for Tetanus prophylaxis as in any area of equal size in the United States. This is due in part to the hazardous occupations engaged in, and thus to the large number of ragged, deep, and penetrating wounds met with as result of these hazardous occupations.

The late war has taught us the value of early prophylactic injections for the wounded. It would be interesting to record the total amount of Tetanus antitoxin administered by the first aid stations and hospitals serving the various armies. When it is necessary to administer the anti-toxin, the procedure, simple as it is, should be a part of the first aid treatment, rather than reserved as a part of later hospital treatment. It is possible for each practitioner, even in remote districts, to keep on hand a small supply of the anti-toxin. The large coal companies can carry in the commissaries sufficient supply to care for emergencies. If not practicable to carry on hand this supply, the long distance telephone or the telegram will bring anti-toxin from the nearest city by the first mail.

The incubation period of Tetanus may be from three to four days, to thirty days or more. Cases developing early are much more virulent than those developing later. Therefore, it is important that the patient with a suspicious wound should at the earliest possible moment receive an immunizing dose of antitoxin (1500 units.) Because of the indefinite incubation period, and because the antitoxin is gradually eliminated from the body, it may be best to repeat the dose in from seven to ten days. The treatment of the wound itself is important—it should be cleansed and debrided thoroughly; as an antiseptic either three per cent tincture of iodine or one per cent silver nitrate solution should be used; the wound should be kept open and cleansed daily, allowing it to heal slowly from the bottom upward; the cautery should never be used as necrotic tissue favors the development of the tetanus organism.

Tetanus antitoxin as supplied today by our leading pharmaceutical houses is very highly purified, small in bulk, and therefore, easily given, and the administration practically never followed by reaction or serum sickness.

J. BANKHEAD BANKS

TAXES AND EDUCATION

Interesting facts pertaining to the cost of government of all the 48 states are contained in a report just made public in *The United States Daily* by the Department of Commerce and since there is now working in West Virginia a commission to study our tax problem, it would seem timely to dwell briefly on that report.

Preliminary statements covering financial statistics of each of the states show expenditures to have been $1,614,562,230 with revenues of $1,485,242,240. The payments for maintenance of the general departments was

$1,036,478,035 for the fiscal period ending January 31, 1926, or the first fiscal period prior thereto, or a total of some $9.20 per capita.

For comparative purposes, it may be said that the department's reports for 1917 show a per capita cost of state government of but $4.19 or less than half the cost in 1925. And yet the states lacked a total of $129,319,990 of having enough money to pay their operating costs, including expenditures for permanent improvements.

Of the total payments in 1925, 64.1 per cent was for operation and maintenance of the general departments; 0.5 per cent, operation and maintenance of public service enterprises; 4.2 per cent for interest on debt; and 31.2 per cent for outlays for permanent improvements.

Of the payments for operation and maintenance of general departments, 38.4 per cent was for education; 16.3 per cent, charities, hospitals, and corrections; 13.9 per cent, highways; 8.3 per cent general government; 5.4 per cent, protection to person and property; 5.5 per cent, development and conservation of natural resources; *2.4 per cent, health and sanitation;* 0.3 per cent, recreation; and 9.6 per cent, miscellaneous, the latter including soldiers' bonus.

Too much emphasis can not be placed on that item: "2.4 per cent for health and sanitation" as compared with 16.3 per cent for charities, hospitals and corrections (state institutions) or the 38.4 per cent for education. Apparently it would seem that the states are more interested in providing institutions for caring for the sick than they are in providing educational facilities to teach the people how to keep well.

It might, in the long run, prove to be a great saving if more money is appropriated for health and sanitation. It must be remembered that only a very small amount of the money appropriated by states for their departments of education is used for health education, the great bulk going for readin', 'riting, and 'rithmetic. In fact, most states depend upon their state health departments to watch over the health of the vast school system and then their legislatures fail to provide adequate funds to operate the department.

As a passing thought it might be well if states made teaching of fundamental health laws compulsory in all schools. At least, this would be one method of guarding the children from listening to the lures of the quack and fakir when they grow to manhood and womanhood. They would know that medicine is a science and that all who fail to qualify to practice medicine were charlatans.

Also it is safe to estimate a substantial reduction in taxes if such an educational program is put forward. There would be less and less need for elaborate state institutions for the care of the indigent, the great majority of whom are victims of the ravages of disease.

Since the foregoing was written there has appeared in the public prints an interview from Doctor W. T. Henshaw, state health commissioner, in which he declares that each of the more than 3,000 teachers in West Virginia schools should have health certificates before taking up their duties. While there is no law compelling the teachers to be examined physically, yet the commissioner believes that the state board of education should require a health certificate be presented before a teaching certificate is issued.

It readily can be seen that much of the work of this association in the line of preventive medicine would be rendered null if a healthy child is placed under instruction of an unhealthy teacher.

Doctor Henshaw suggests that the education board require the health certificate to show that the teacher is free from communicable disease—in other words, the teachers should be physically fit to care for physically fit children.

Incidentally, there would be a great saving to the state in having healthy teachers on the job. Fewer days would be lost from classes. In Illinois it has been estimated, Doctor Henshaw says, that 60 per cent of the 50,000 school teachers lose virtually 200,000 school days at a cost of about $1,000,000 to the taxpayers of that state annually, and he believes the same to be true proportionately in West Virginia.

Apparently the preventive medicine campaign in the state is taking root deeply and after all, Doctor Henshaw's recommendation really means periodic health examination of apparently healthy school teachers. In time this undoubtedly will be carried along into other governmental and industrial divisions in our commonwealth.

PROTECTING THE PUBLIC

Every once in awhile, a newspaper shows considerable courage in its editorial columns and should be given considerable support from the medical profession.

The Reverend Sproul is to return to Wheeling for a short period and he again wants the sick, the maimed, the halt and those who see but poorly to hasten to his persuasive exhortations.

It is too bad that so great a luminary should have to return but there is always some work left undone in any movement. We will admit that for so great a healer whose name was reported to have been on the lips of thousands. But this is a heedless world—one is soon forgotten as is eaten bread. Anyway, the Reverend Sproul returns!

The writer could never see any results whatsoever from his first visit, celebrated as it was, but then we are prejudiced.

Our view always was that the good dramatic plays do not have to leave New York city—that the public traveled to them. So, it would seem that any great healer would but need stay in one spot, such as Medicine Hat, and the crowds would pass the Mayos to worship at his shrine. But we were mistaken. Even when these healers stay in one spot, something goes wrong. That old bug-a-boo, Human Nature, steps in and disorganizes the best laid plans.

Far be it from us to scoff at what is sincere, earnest and well-intentioned. Who knows but what the world is waiting for some kind of a spiritual sunrise? Be all this as it may, many of our ideas are admirable expressed in an editorial appearing September 18 in *The Wheeling Intelligencer*, which follows:

"The order for the arrest of Aimee Semple McPherson, her mother and three other associates revives a case that ought to be prosecuted with the utmost vigor. If the woman is innocent, no harm can come to her. If she is guilty, the history of the disgusting offenses and methods she is accused of using ought to be made public knowledge, if for no other reason than a warning to the simple people who are daily imposed upon, cruelly hoodwinked and cheated in the name of religion.

"The 'kidnapping' got Aimee a million dollars worth of free publicity, to say nothing of the forty thousand dollars collected from her followers for a memorial and which was never returned. Her brazen attempts to manufacture alibis after the finger of suspicion was pointed have certainly alienated what sympathy there was for her, save perhaps that of her most blind and ignorant devotees. She should either be vindcated or properly punished in court because she has become more than an individual. She is a national symbol of the traveling 'miracle'-working evangelist, operating on a strictly cash basis at the expense of the loyal and competent local clergy.

"There are a good number of these 'miracle'-workers in the United States and, unfortunately, a good many people simple-minded and desperately hopeful enough to provide them with a kingly income. Hooking the ignorant ideas and fears of these people with the strong religious impulse that is in every human heart, these 'wonder-performing' evangelists do incalculable harm. Every year hundreds of cases of bodily infirmity that would respond to correct surgical treatment are made incurable by the abuses inspired by the false confidence inculcated by these 'healers by holy thought.' For a moment of hysterical exaltation, the price of untold misery for a lifetime is often paid.

"It is too bad that the county medical societies and the police everywhere do not keep these charlatans under control, as they do in some places. Perhaps those now lax will learn a salutary lesson when the story of the flamboyant Aimee is finished."

HARRY M. HALL

THE INSURANCE PLAN

While the number of members who have availed themselves of the association's automotive insurance plan, whereby a saving of from 25 to 30 per cent of the total premium is assured annually, is comparatively small yet those who have placed their insurance through the executive secretary's office are pleased with the results.

Within the last two weeks, one of the first members to take out policies covering public liability, property damage and fire and theft insurance has reaped a dividend re-

ward. The total cost of his policy on September 15, 1925, was approximately $45. This year he renewed his insurance and the saving to him on his 1926-27 premium was approximately $13. As it so happens, the state and county society membership dues in his society are $14 a year. Thus his membership cost him virtually nothing through the simple medium of clearing his insurance through the secretary's office.

The insurance plan is open for all members. It is but one of the many services to members performed in state headquarters. The member here referred to received his *Journal,* medical defense protection and all of the other benefits that membership makes possible through the simple medium of letting the executive secretary take care of his insurance. Of course, the insurance saving was applied on his following year's auto coverage, but yet it amounted to as much as his association dues. Thus, he gets both for the price of one.

"HIGH HATTING"

Ever so often followers of the Medical Profession give vent to a considerable amount of emotion on the base ingratitude exhibited by the laity in regard to their altruistic methods for their benefit. These outbursts are both natural and reasonable.

However, sometimes we are inclined to sympathize with the laity when we see the action of some State Boards. For instance the State Examination Board for Internes in Pennsylvania will not acknowledge the standing of the Ohio Valley General Hospital and goes so far as to deny the men the right to take the examination even when they have graduated at Pennsylvania Colleges. At the same time men in their own state taking an interneship in hospitals not one-half the size of the Ohio Valley General, or having one-half its faculties are welcomed. There may be an answer to this, but so far we have seen no Wheeling doctor who received it. It is another case of State Rights, and so has to be considered.

However the laity does not understand such positions and they naturally think if we behave that way towards each other that there must be something wrong with us. It is the same way in the nursing profession. Nurses coming to the Ohio Valley General hospital from New York exhibit anything but a superior training; in fact there are—dare we say it—short comings.

We are not for recognizing everything in this matter,but there should be some way of recognizing hospitals so they can be given a standard that will pass them anywhere as definitely being in "A," "B," or "C," classes. After that there could be no "high hatting."

HARRY M. HALL

REPORTS FROM COMPONENT SOCIETIES

Grant-Hardy-Hampshire-Mineral

The Grant - Hardy - Hampshire - Mineral Medical society met in the Court House at Petersburg Thursday, August 19 at 2 P. M. Members attending this meeting were Drs. W. M. Babb, W. T. Highberger, M. F. Wright, R. W. Love, J. B. Grove, A. A. Scherr, O. V. Brooks and V. L. Dyer. Visitors, Drs. George A. MacQueen, Hoffman and Bess, of Keyser.

No papers were read at this meeting, but the following topics were presented for general discussion by all present. First—"Prohibition, Privileges Granted to Physicians." The main idea in presenting this topic for discussion was to determine the attitude of the members toward the privilege of prescribing liquors which at the present is withheld from West Virginia physicians by the State Prohibition laws only. All members and visitors entering into this discussion expressed the opinion that physicians should be extended this privilege. A committee was appointed to draft resolutions setting forth this opinion, and following the suggestion of Dr. MacQueen, a copy of the resolutions when drafted will be sent to each delegate and

senator representing these counties in the West Virginia legislature. It is not expected that the prohibition laws will be repealed upon the request of one society, but it is hoped that a similar action on the part of all component societies together with other forces that might be brought to bear upon it, will eventually lead to such a modification of this law as to grant to physicians the privileges they now seek.

The second topic discussed was the "Shepherd-Towner Maternity Law." Stated in a few words, this law in its entirety was opposed by all physicians who discussed it, and yet all claimed for it some commendable features.

"The attitude of the State to the Component Societies" was the third topic presented. The fact that the local society is in reality the State society and that the affairs of the State organization are conducted by the members of the local organizations was emphasized by Dr. MacQueen. He expained that if the affairs of the State society are not conducted properly the members of the Component Societies can place the blame upon no one but themselves.

This society feels particularly fortunate in having such men as Dr. MacQueen and Dr. Bess come into our midst. These men have taken charge of the Hoffman Hospital at Keyser and are continuing the good work that has been done there for years by the late Dr. Chas. S. Hoffman.

Dr. MacQueen is taking care of the general work and Dr. Bess is doing Eye, Ear, Nose and Throat work.

The society meeting adjourned to meet in Burlington in October.

—V. L. DYER, *Secretary.*

———o———

Fayette

With some thirty members of the society in attendance, an interesting monthly meeting was conducted in Rotary Hall, Fayetteville, the night of September 14. Charleston doctors were on the program, John E. Cannady presenting a talk on "Osteomyelitis"; C. A. Ray talked on professional ethics and the need for more thorough diagnosis and presented a case report on shoe-dye poisoning which will be found elsewhere in this *Journal;* while William A. Thornhill gave an illustrated lecture on "Radium, Its Field and Limitations." Dr. Ray stressed the need for careful diagnosis in presenting the case of poisoning, telling how he discovered the source of infection.

The meeting was enthusiastic. It was preceded by a chicken dinner served by ladies and over which Doctor E. J. Grose presided as host. Doctor H. A. Walkup, president of the society, announced that plans are being made for a "rousing" meeting with the Raleigh society to be held either in Beckley or Mount Hope the second Tuesday in October. Invitation was extended to physicians in neighboring counties to participate.

Sterrett O. Neale, executive secretary of the state association, spoke briefly, explaining the purpose of the advertising campaigns in the several component societies.

H. C. SKAGGS, *Secretary.*

———o———

Upshur

A meeting of the Upshur County Medical society was held at Buckhannon, September 4th, 1926 at 2 p. m. Minutes of the preceding meeting approved as read.

Under the head of unfinished business, the question of the society affiliating with some other county society was taken up and a motion by Dr. Rusmisell, to affiliate with the Central West Virginia Medical society was seconded by Dr. Brown. After a lengthy discussion, in which all members present participated, the motion carried.

A committee was appointed to confer with the Central West Virginia Medical society and arrange for the next meeting to be held at Buckhannon.

Some interesting cases were discussed by those present, mostly from case records, and the meeting was very interesting and instructive.

Drs. S. S. Hall and R. G. Cutright, both of Buckhannon, were admitted to membership.

—L. W. DEEDS, *Secretary.*

Barbour-Randoph-Tucker

The Barbour - Randolph - Tucker County Medical society met in the Y. M. C. A. Building, Elkins, September 2, 8:00 P. M., and the following were present:

Drs. A. P. Butt, C. A. Groomes, W. W. Goden, B. I. Goden, A. S. Bosworth, O. L. Perry, C. H. Hall and J. C. Irons; Dr. John Thames, visitor.

Dr. Groomes presided. Minutes of previous meeting approved as printed in *The Journal*, except the addition of the election of Dr. G. A. Granger of Coketon, and Dr. G. N. Cromwell of Davis, as members of the society at the meeting at Davis, June 26.

On motion presented in writing, by Dr. T. M. Wilson, Dr. A. H. Woodford, having been a member for 15 years and having passed the 65-year age, and having practically retired from active practice of medicine, was elected an honorary member of the society.

The recommendation of the American Medical association for formation of committees for Medical Relief in Disaster were approved, and since our territory embraces three large counties, Dr. C. A. Groomes of Elkins, will act as chairman in first aid work, for Randolph county; Dr. C. B. Williams of Philippi, for Barbour county and Dr. J. L. Miller of Thomas, for Tucker county.

The recommendation from Dr. Ireland relative to securing written pledges from State senatorial and House of Delegates candidates, stating their attitude relative to health legislative measures and regulations, was read, but no action was taken.

Dr. John Thames, Kanawha County Health Officer, was present and gave an intersting talk on "The Physician's Part in Public Health Program. Dr. Thames stressed the vital importance of the physician's activity cooperating in the health program. He showed how much had been accomplished through the health education, but stressed the need for greater work yet to be done, in educating the masses along health measures since the vital need is that the public should know the great importance of the work, the dangers that surround us, and how diseases, suffering and death may be avoided. He emphasized the importance of demonstrating the value of prevention by vaccine, etc.

In discussing the health program, as outlined by Dr. Thames, Dr. W. W. Golden said he heartily approved of the program, as explained, in the main, and said he was convinced that the furthering of the program would be of great aid to the practicing physician, rather than injury as some feared.

Dr. O. L. Perry cited a case in which he had difficulty in having a family immunized from the danger of typhoid fever till a visitor from Virginia told them how it served the need in her home community. Then all were glad to avail themselves of the benefits of typhoid immunization.

Dr. Groomes extended the thanks of the society to Dr. Thames for his instructive and interesting talk.

Other parts of the intended program were postponed untill next meeting in October, which is for Barbour couney, if desired.

NOTES

Dr. W. E. Whitesides of Parsons, spent the latter part of August in New York City doing post-graduate work.

Dr. A. P. Butt of Elkins, spent a part of August in Rochester, Minn., attending Mayo's Clinic.

Dr. Moses Paulson, formerly of Baltimore, who recently married Miss Helen Golden, daughter of Dr. W. W. Golden, has accepted a position as pathologist and bacteriologist in Davis Memorial hospital.

Dr. John Thames is quite busy attending teachers' institutes. He is giving the teachers some impressive talks.

J. C. IRONS, *Secretary.*

———o———

Cabell

Announcement of the first of a series of three graduate lectures on special subjects of interest to physicians and surgeons to be given under auspices of the Cabell County Medical society has been made. The first will be given by Doctor Alfred Friedlander of Cincinnati, on "Heart Diseases," October 14, Prichard hotel, Huntington. Similar lectures will be given in November and December and physicians of neighboring medical societies are invited to attend.

STATE AND GENERAL NEWS NOTES

SIXTIETH ANNUAL MEETING SET FOR JUNE 21-23, 1927

Announcement is made by the executive secretary that the sixtieth annual meeting of the State association will be held in White Sulphur Springs June 21, 22 and 23, 1927.

The dates were fixed at a conference between the secretary and the management of the famous resort and approved by President-elect Ogden.

The scientific committee already has started work on the program with the aim of making it most interesting and carry an appeal to every member. Dr. Harry G. Steele of Bluefield, is chairman of this committee.

Announcements will be made from time to time as plans for the session progress and it is hoped that members will so shape their affairs that they can attend.

———o———

INTER-STATE POST GRADUATE ASSEMBLY MEETS THIS MONTH

Announcement is made that the annual Inter-State Post Graduate assembly of North America will conduct its sessions in the municipal auditorium, Cleveland, October 19 to 22, inclusive. Pre-assembly clinics will be conducted in Cleveland hospitals October 14 to 16, inclusive.

The membership is by registration. In order to register, a physician must be in good standing in the State or Provincial Society in the territory in which he resides.

It is urged that physicians bring their A. M. A., State or Provincial membership cards or receipts so as to facilitate registration.

All registrations during the days of the Assembly will take place at the Registration Bureau situated in the Exhibit Hall. A special badge will be provided for all those who register. Arrangements have been made for advanced registration at the Hotel Cleveland, Sunday afternoon and evening, and those in Cleveland at that time are urged to register on Sunday.

This Association is purely a Post Graduate Association. It exercises no political nor legislative duties.

It is the aim of the organization, in its annual assemblies, to present to the medical profession the approved advancements in medical science and research, not unmindful of the practical side of medical study. To this end diagnostic clinics, orations, symposia and discussions are offered.

Physicians should make their reservations as early as possible by communicating with the hotel of their choice, or the Convention Bureau Cleveland Chamber of Commerce.

———o———

DR. W. D. M'CLUNG WILL REMAIN AT SPENCER

Dr. W. D. McClung has been reappointed as superintendent of the state hospital for the insane, at Spencer, by Governor Gore, the appointment to continue at the "will and pleasure of the governor."

Dr. McClung has been held at the institution by Governor Gore in spite of the criticism directed at the physician which came almost exclusively from sources near the institution.

Governor Gore inspected the hospital with members of the board of control last week and is said to have found conditions in excellent shape. He was particularly struck with the cleanliness of the place and the organization which handles the patients.

Criticism against Dr. McCung which in times past has been rather severe, lately is said to have died down considerably. It was said to have been caused by the superintendent's policies, which closed the grounds adjacent to the hospital to pleasure and picnic parties. Also the auditorium at the hospital was denied the public as a place for holding dances and this is said to have brought forth some feeling against Dr. McClung. The superintendent, however, is said to have held fast to his determination not to permit anything on the hospital grounds which might interfere with the quiet, rest and treatment of the patients—*The Charleston Mail.*

MEDICAL COLLEGE'S FACULTY CHANGED

Changes in the faculty of the University school of medicine for the term of 1926-27 have been announced by Dean John N. Simpson.

A year's leave of absence has been granted Dr. E. H. Van Liere, instructor of physiology, who has secured a fellowship and will do graduate work for his Ph.D. degree at the University of Chicago. His place will be filled by Dr. J. Frank Pearcy, and Professor Weaver, laboratory assistant of the University of Chicago, will take Dr. Pearcy's place as assistant professor of physiology.

A new post to be filled by Prof. J. B. Taylor of the University of Kentucky, is that of assistant professor of anatomy.

Dr. C. C. Fenton of New York, a member of the University medical staff four years ago, will succeed Dr. William A. Smith as professor of pathology.

New instructors appointed are: Abel Miller, physiology; Paul D. Lewis, physiological chemistry and pharmacology; and Willard Daniels, anatomy.

———o———

CHARLES E. HOLZER HEADS TRI-STATE MEDICAL SOCIETY

Dr. Charles E. Holzer of Gallipolis, Ohio, was elected president of the Central-Tri-State Medical society at its third meeting in Huntington, September 9. Dr. John E. Cannady of Charleston, is first vice president, and Dr. J. M. Salmon of Ashland, Ky., is second vice president. Dr. F. O. Marple of Huntington, was re-elected secretary-treasurer.

The members of the advisory council were re-elected. They are:

Oscar B. Biern, M. D.,Huntington,W. Va.; Bryon Bing, M. D., Pomeroy, Ohio; R. H. Dunn, M. D., Charleston, W. Va.; Chas. E. Holzer, M. D., Gallipolis, Ohio; J. W. Kincaid, M. D., Catlettsburg, Ky.; W. R. Laird, M. D., Montgomery, W. Va.; O. W. Lusher, M. D., Pt. Pleasant, W. Va.; W. F. Marting, M. D., Ironton, Ohio; Gilbert Mickleth-waite, M. D., Portsmouth, Ohio; R. E. Ray, M. D., Jackson, Ohio; I. P. Seiler, M. D., Piketon, Ohio; L. E. Steele, M. D., Logan, W. Va.; L. H. Winans, M. D., Ashland, Ky.

Prior to the opening of the scientific session, the council met and approved of a draft of constitution and by-laws, which was adopted at the business meeting in the evening. The council also designated *The West Virginia Medical Journal* as the official publication of the society.

The scientific program included addresses by Dr. W. Wayne Babcock of Philadelphia, on "Problems and Practice in Biliary Surgery;" by Dr. P. Brooke Bland of Philadelphia, on "The Management of Labor;" and by Dr. S. G. Gant of New York, on "The Surgical Treatment of Colitis and Demonstrating the Method of Operating Upon Ano-Rectal Disease Under Local Anesthesia."

Dr. Gant also was the principal speaker at the banquet served at 7 p. m.

The meeting was largely attended. All members in good standing of the Ohio, Kentucky or West Virginia Medical associations are eligible for membership in this society.

———o———

ANNUAL RED CROSS ROLL CALL, NOVEMBER 11-25

Moved by an authentic picture of economic loss involved in deaths from accident and preventable disease in the United States every year, 96 fraternal organizations, representing an aggregate membership of nearly 10,000,000 persons in the United States, through the recent National Fraternal Congress, decided to urge on their local lodges a program of cooperation with the American Red Cross in reducing this wastage.

This cooperation it was suggested, should take the form of organizing classes in Life Saving, Home Hygiene, which means home nursing for the ailing and modern housekeeping; dietetics, and other subjects of vital importance to general life extension.

The request for such action on the part of the Fraternal Congress was embodied in a report submitted by Norman B. Harris, chairman of the Red Cross committee of the Congress, which originally was organized during theWorld War, and since continued because of the valuable service it was able to render. Mr. Harris also is chairman of the President's Council.

In urging the organization of such classes, Chairman Harris pointed out that the Red Cross is perhaps the one organization equipped to undertake such a program, owing to its semi-official character, and to the fact that in virtually every town, there is an American Red Cross Chapter able to furnish qualified teachers for a class in the subjects enumerated.

Some of the conditions discovered by health authorities of the country bear out the importance of such training in health subjects, cited by Chairman Harris as part of the Red Cross work. It is estimated for example, that 75 per cent of America's school children have physical defects of some kind ranging from defective eyesight to impaired hearing, and sufficiently serious to retard their physical development and their progress in school. It has been discovered that a great number of American school children suffer from malnutrition, and that this serious condition is not found among less fortunate children alone; they can be found in homes of prosperous families just as they are in those of poorer classes.

Such instances show the every-day work of the American Red Cross, and are typical of the usefulness of other of its services in different fields.

The Annual Roll Call of the Red Cross, from November 11th to 25th, is an appropriate time to endorse the work of this typically American organization, by joining its ranks.

———o———

PSYCOSULPHENE BARRED FROM MAILS BY MR. NEW

Another "wonder treatment" has been barred from the mails by Postmaster General New. In an order the latter part of August, the postoffice department denies the use of the mails to McNickle & Company of Spring Hill, W. Va., manufacturer of Psycosulphene.

Attention of the professional relations committee of the State association was called to this product. Sample boxes of Psycosulphene were purchased and sent in their original package by registered mail to the bureau of chemistry of the American Medical association for analysis. It was ascertained that the "product of chemical research" actually consisted of a few cents worth of baking soda, starch, sulphur and borax, the package selling for $3.50 per box.

While the committee made no formal representations, it seems that the postoffice department became interested in the mystery of Psycosulphene and an inspector was assigned to investigate. He made his report, two hearings were conducted in Washington and the full text of the opinion of Mr. Horace J. Donnelly, solicitor for the postoffice department, follows:

> Under date of June 28, 1926, the above named concern (McNickle & Company) was forwarded a copy of a memorandum of charges on file in this office and called upon to show cause, on July 23, 1926, why a fraud order should not be issued against it. At the time set for the hearing Mr. J. B. McNickle, who is doing business under the trade name of McNickle & Company, appeared here, accompanied by his attorney, Stewart M. Wood, Esq., of Spring Hill, W. Va. A general denial of the charges as alleged was entered on the record by Mr. Wood. At the close of the hearing on July 23, 1926, the respondent, through his attorney, requested and was granted a continuance to August 19, 1926, to enable him to present further evidence in the form of oral medical testimony.
>
> On August 19, 1926, Mr McNickle appeared here unaccompanied by an attorney and without witnesses as promised at the prior hearing. He was given full opportunity to submit anything he desired. He gave some further personal testimony and offered a number of so-called testimonial letters. There were also introduced on the part of the Government, further medical testimony and some documentary evidence.
>
> All of the evidence in the case has been carefully considered and I find the facts to be as follows:
>
> Mr. J. B. McNickle, trading as McNickle & Company is engaged in selling through the mails a medicinal product, in powder form, known as Psycosulphene. He alleges he mixes the preparation himself, although, according to the evidence, he is neither a physician, a chemist or pharmacist, nor does he employ such persons. The medicine, he states, is made from a formula given to him by a person whom he rather vaguely described as a German chemist. He positively refused to divulge the name of the man, nor would he furnish the so-called formula, although he insisted that the ingredients of the medicine as determined by the Government's analysis were not all shown.

The analysis of the medicine made by the Department of Agriculture, Bureau of Chemistry, shows the following ingredients in "Psycosulphene":

Sodium bicarbonate, 53.8 per cent; borax (by difference), 34.2 per cent; sulphur, free, 2.3 per cent; starch, 9.7 per cent.

In view of Mr. McNickle's assertion at the hearing on July 23, 1926, that the preparation contained other ingredients not found by the Bureau of Chemistry analyst, the product was again analyzed by the bureau, having this statement particularly in mind, with the result that absolutely no other ingredients were discovered, and the chemist who made the analysis so testified at the hearing on August 19. It was also testified by Dr. L. F. Kebler, of the Bureau of Chemistry, under whose supervision these analyses were made, that he had the preparation analyzed by several other expert chemists whose findings corroborated that above set forth. A still further analysis, made under the direction of the American Medical association, was introduced in evidence. This analysis also checked up with that originally made by the Bureau of Chemistry.

According to the directions this preparaton is to be used by putting a "pinch" in each shoe of the patient each morning for 72 days, if not sooner cured of the various diseases and ailments for which it is recommended and sold. If the patient is bed fast he is to put two pinches in each stocking once a day. A box of the powder is sold for $3.50 and is supposed to last for about 72 days if used as directed.

The post office inspector who investigated this case through test correspondence, purchased the medicine, through the mails, for such alleged diseases and ailments as asthma, high blood pressure, failing eyesight, bladder trouble and stricture. Circulars and other matter in evidence show that the preparation is recommended and sold through the mails for the cure of rheumatism, congestion of the lungs, sleeping sickness, neuritis, sciatica pains, heart trouble, arterio sclerosis, paralysis, constipation, female trouble, blood poisoning, eczema, anemia, postrate gland trouble "of any description," varicose veins and nervous disorders "of any kind." It is claimed to be a "specific" for the relief of rheumatism, neuritis, and "all diseases resulting from a deranged and impoverished condition of the blood." The promoter admits that "this is a bold—almost defiant statement," but asserts that he will "meet the test."

McNickle claims that psycosulphene produces the results claimed for it by exerting a "marvelous chemical action" on the body by increasing the circulation to a point where nature drives the poison and pain from the body so that health can "reign supreme," and that the medicine will cleanse the pores and sweat glands of the body so that nature can throw off the waste matter. It is claimed that the the medicine is taken in through the feet and will manifest its presence in the body by a "bitter" taste in the mouth in a short time after continuing the treatment.

According to the testimony of Dr. L. F. Kebler, a physician and drug expert, hereinbefore referred to, psycosulphene has no marvelous chemical action on the body, as claimed, and it will not cure, remedy or relieve the various diseases and ailments enumerated in the respondent's literature hereinbefore referred to. According to Dr. Kebler, the claims made for psycosulphene in the literature are absurd and without any foundation in truth.

At the hearing on August 19, the Government produced Dr. Charles Armstrong of the Public Health Service Hygienic Laboratory, who testified that the medicine would not cure, or even favorably affect, the various diseases and ailments enumerated in McNickle's literature. He stated that psycosulphene is composed of drugs of well known physiological action, that these drugs are definitely known to have no influence on the diseases referred to even when introduced into the system; that as prescribed by McNickle they can not get into the body. It was shown that one of the chief functions of the skin is to exude certain waste material, and that very few substances are absorbed through the skin. No medical testimony was introduced by the respondents to refute that offered by the Government and no attempt was made by the respondent to cross-examine Dr. Armstrong.

According to the evidence, McNickle bases all of his claims on testimonials by laymen, a source of information which this office has found by past experience to be entirely unreliable and in some instances even dangerous. At the time of the hearing on July 23, 1926, the respondent produced several witnesses who testified they had been cured by the use of psycosulphene. Two of these admitted they were agents selling psycosulphene on commission. One or two others had sold or distributed some of the medicine but claimed they received no pay. All of these witnesses admitted that they had used various remedies other than psycosulphene up to the time they started using the latter preparation. One admitted he was using other means to bring about relief in connection with the use of psycosulphene.

I find that the claims under which this preparation is being sold through the mails are utterly at variance with well known physiological laws, and are false and fraudulent.

According to the evidence, Mr. McNickle is the sole owner of this business. It appears that he started it about 1920, but did not exploit

it through the mails until 1923. In 1924 his gross receipts were about $16,000. Mr. McNickle is assisted by six employes, none of whom are physicians, chemists or pharmacists. Neither has Mr. McNickle any training along these lines.

About 20 pieces of first class mail are received daily.

The evidence shows and I so find that this is a scheme for obtaining money through the mails by means of false and fraudulent pretenses, representations, and promises.

I therefore recommend that a fraud order be issued.

———o———

MANY LEGISLATORS SEEKING RE-ELECTION

Candidates for the state senate and house of delegates in the 1927 legislature as returned by the August primaries are busy campaigning for the November general election. A number of members of both houses are seeking re-election. Six of the fifteen senators seeking re-election were members of the last legislature and four of the six voted for the chiropractic bill. Senator A. C. Herold, whose re-election is assured since he is unopposed in the Democratic stronghold in the tenth district, was against the bill, but was paired with Senator Byrer, who was for it and who was absent. Senator Herold was one of the leading opponents of the measure. The complete list of candidates to be voted on in November follows, showing those members of the last legislature who voted for and against the chiropractic proposal:

STATE SENATE

First District:—
Wright Hugus, (R) Wheeling, **For**
Samuel P. Christian, (D) Wheeling, Non-Member.

Second District:—
Walter R. Reitz, (R) Sistersville, Non-Member.
George N. Yoho, (D) Cameron, **For**

Third District:—
Albert B. White, (R) Parkersburg, Non-Member.
Joseph Z. Terrell, (D) Parkersburg, Non-Member.

Fourth District:—
Lewis H. Miller, (R) Ripley, Non-Member.
Kenna K. Hyre, (D) Ripley, Non-Member.

Fifth District:—
Dennis McNeil, (R) Huntington, Non-Member.
Dr. James B. Taylor, (D) Huntington, Non-Member.

Sixth District:—
M. Z. White, (R) Williamson, **For**
J. Floyd Harrison, (D) Wayne, Non-Member.

Seventh District:—
T. H. Lilly, (R) Hinton, Non-Member.
Wm. H. Sawyers, (D) Hinton, Non-Member.

Eighth District:—
Walter S. Hallanan, (R) Charleston, Non-Member.
Clyde B. Johnson, (D) Charleston, **Against**

Ninth District:—
L. Ebersole Gaines, (R) Fayetteville, Non-Member.
A. B. Abbott, (D) Fayetteville, Non-Member.

Tenth District:—
No Nomination, (R).
A. C. Herold, (D) Sutton, **Paired**

Eleventh District:—
Ira L. Smith, (R) Fairmont, Non-Member.
Smith Hood, Jr., (D) Rivesville, Non-Member.

Twelfth District:—
Blaine Engle, (R) Clarksburg, Non-Member.
Howard L. Robinson, (D) Clarksburg, Non-Member.

Thirteenth District:—
Wm. Taylor George, (R) Philippi, Non-Member.
B. H. Hiner, (D) Franklin, Non-Member.

Fourteenth District:—
E. Bunker Reynolds, (R) Keyser, **For**
Forrest W. Stemple, (D) Aurora, Non-Member.

Fifteenth District:—
Frank B. Robinson, (R) Ranson, Non-Member.
Ira V. Cowgill, (D) Romney, Non-Member.

HOUSE OF DELEGATES

Braxton:—
W. A. Street, (R) Belington, **For**
Henry C. Daugherty, (D) Philippi, R. F. D.

Berkeley:—
Charles Beard, (R) Martinsburg, **For**
H. L. Alexander, (R) Martinsburg.
John H. Zirkle, (D) Martinsburg.
John L. Weaver, (D) Martinsburg.

Boone:—
H. H. Andrews, (R) Whitesville, **Against**
J. F. Sullivan, (D) Madison.

Braxton:—
James M. Boone, (R) Belfont.
John D. Sutton, (R) Sutton.
P. N. Blake, (D) Orlando.
L. T. Harvey, (D) Frametown.

Brooke:—
James L. Dooley, (R) Wellsburg, **Against**
A. S. Craig, (D) Wellsburg.

Cabell:—
Frank Eaton, (R) Huntington.
H. E. Beckett, (R) Barboursville.
W. B. Honaker, (R) Huntington
Dr. B. W. West, (R) Huntington.
Wilbert H. Norton, (D.) Huntington.
Abe Davis, (D) Huntington, **For**
Walker Long (D) Huntington.
Lee A. Wolfard, (D) Huntington.

Calhoun:—
Lynn S. Oles, (R) Grantsville.
G. Warren Hays (D) Arnoldsburg.

Clay:—
Ira D. Starcher, (R) Swandale.
Ralph R. Lockhart, (D) Clay, **Against**

Doddridge:—
C. C. Ashburn, (R) West Union.
No Nomination, (D).

Fayette:—
W. D. Lawton, (R) Glen Ferris.
A. E. Stacy, (R) Glen Ferris.
S. T. Carter, (R) Fayetteville.
W. H. Thomas, (R) Montgomery.
Ira C. Nutter, (D) Boomer.
R. H. Giles, (D) Thayer.
Mason Parker, (D) Mt. Hope.
W. W. Skaggs, (D) Edmond.

Gilmer:—
No Nominations, (R).
J. M. Hays, (D) Glenville, **For**

Grant:—
J. L. Rexroad, (R) Lehmansville.
Thomas Grove, (D) Petersburg, **Against**

Greenbrier:—
W. E. McCreery, (R) White Sulphur Springs.
W. M. Thompson, (R) Alderson.
W. W. Stevens, (D) Alderson, **For**
W. T. Sheppard, (D) Smoot.

Hampshire:—
No Nominations, (R).
Caudy Davis, (D) Yellow Springs.

Hancock:—
J. William Moulds, (R) Hollidays Cove, **For**
O. O. Allison, (D) Chester.

Hardy:—
No Nomination, (R).
P. D. Delawder, (D) Lost River, **For**

Harrison:—
James M. Guiher, (R) Clarksburg.
Earl B. Kyle, (R) Clarksburg.
Dr. L. M. Robinson, (R) Clarksburg, **For**
Arthur J. Thompson, (R) Clarksburg, **Against**
Edgar E. Righter, (D) Shinnston.
John Patton, (D) Mt. Clare.
Charles W. Davisson, (D) Lost Creek.
Ray W. Garvin, (D) Clarksburg.

Jackson:—
Eugene Slaughter, (R) Cottageville, **For**
Roy Hylbert, (R) Ravenswood.
J. Kenna Kerwood, (D) Ripley.
C. L. Brown, (D) Ravenswood.

Jefferson:—
No Nomination, (R).
Robert L. Withers, (D) Kabletown.

Kanawha:—
Chas. B. Halstead, (R) South Charleston.
J. Howard Hundley, (R) Charleston, **Absent**
Dr. C. M. Jividen, (R) Charleston.
E. M. Keatley, (R) Charleston, **For**
Harold S. Matthews, (R) Charleston, **Absent**
Dr. A. C. Vandine, (R) Charleston.
Ben Brown, (D) Charleston, **Against**
John H. Campbell, (D) Chelyan.
E. E. Cummings, (D) St. Albans.
Clyde H. East, (D) Charleston.
Howard Kuhn, (D) Charleston.
D. Ray Withrow, (D) Handley.

Lewis:—
J. H. Brewster, (R) Weston, **Absent**
Robert M. Blair, (R) Weston.

Lncoln:—
Enos Scraggs, (R) West Hamlin.
M. D. Good, (D) Griffithsville.

Logan:—
Harry S. Gay, Jr., (R) Mt. Gay.
William C. Turley, (D) Logan, **Against**

Marion:—
Homer A. Bartlett, (R) Fairmont, **For**
Harry G. Fletcher, (R) Fairmont.
Ellsworth Morgan, (R) Mannington.
Fred R. Brumage, (D) Fairmont, **For**
J. D. Furbee, (D) Glover's Gap, **For**
Howard A. Prickett, (D) Fairmont.

Marshall:—
Evan G. Roberts, (R) Moundsville.
Dr. Will F. Grow, (R) Glen Easton.
No Nomination, (D).

Mason:—
R. T. Embleton, (R) Hartford, **For**
George A. Rairden, (R) Leon.
Pat M. Wilson, (D) Beech Hill.
W. H. Vaught, (D) Pt. Pleasant.

Mercer:—
T. K. Massie, (R) Athens.
Roy A. Cole, (R) Montcalm.
Davis Thorn, (R) Princeton.
F. M. Peters, (D) Bluefield.
Dr. S. E. Holroyd, (D) Athens, **Against**
Dr. S. T. Bird, (D) Princeton, **Against**

Mineral:—
R. Marsh Dean, (R) Elk Garden, **For**
W. W. Long, (D) Keyser.

Mingo:—
Jos. C. Hatfield, (R) Vulcan.
John S. Hall, (D) Williamson, **Against**

Monongalia:—
J. W. Hartigan, (R) Morgantown.
H. S. Vandervort, (R) Morgantown.
Ruth Wood, (D) Morgantown.
J. V. Funderburk, (D) Morgantown.

Monroe:—
O. L. Miller, (R) Union.
C. F. Dickson, (D) Organ Cave.

Morgan:—
E. P. Clark, (D).
V. E. Johnson, (R) Berkeley Springs.

McDowell:—
Dr. B. E. Downs, (R) Welch.
Dr. M. H. Tabor, (R) Crumpler.
Dr. John C. Houchins, (R) Northfork
E. Howard Harper, (R) Keystone, **For**
F. W. Hardy, (D) Keystone.
No others nominated.

Nicholas:—

E. D. Dorsey, (R) Richwood.
C. W. Bell, (D) Zela.

Ohio:—
J. W. Cummins, (R) Wheeling.
Harry A. Weiss, (R) Wheeling, **For**
Milton McColloch, (R) Wheeling, **For**
John Ulrich, (R) Wheeling.
A. W. Paull, (D) Wheeling.
H. A. Miller, (D) Wheeling.
P. J. McGinley, (D) Wheeling.
Jack R. Adams, (D) Wheeling.

Pendleton:—
P. N. Nelson, (R) Doe Hill, Virginia.
J. R. Armstrong, (D) Doe Hill, Virginia.

Pleasants:—
Chas. E. Fogle, (R) St. Marys.
G. D. Smith, (D) St. Marys.

Pocahontas:—
Dr. Geo. F. Hull, (R) Durbin.
Frank R. Hill, (D) Marlinton, **Against**

Preston:—
S. P. Mitchell, (R) Kingwood.
James Henry Smith, (R) Bruceton Mills.
No Nominations, (D).

Putnam:—
M. M. Harrison, (R) Confidence.
Calvin A. Neal, (D) Nitro.

Raleigh:—
A. C. Sutphin, (R) Beckley.
C. L. Heaberlin, (R) Beckley, **Against**
W. C. Agee, (D) Beckley.
Fred C. George, (D) Beckley.

Randolph:—
No Republican Nominations.
Eugene H. Arnold, (D) Elkins, **For**
Dr. C. P. Crawford, (D) Elkins.

Ritchie:—
Robert Morris, (R) Harrisville, **Against**
P. R. Garrett, (D) Harrisville.

Roane:—
W. P. Pool, (R) Spencer.
Wm. Woodyard, (R) Spencer.
No Democratic Nomination.

Summers:—
C. E. Garten, (R) Hinton.
T. N. Read, (D) Hinton, **Absent**

Taylor:—
James O. Holt, (R) Grafton.
N. F. Kendall, (D) Grafton.

Tucker:—
J. Wm. Harman, (R) Parsons.
Sam W. Gross, (D) Thomas.

Tyler:—
I. M. Underwood, (R) Middlebourne, **For**
No Democratic Nomination.

Upshur:—
E. H. Knabenshue, (R) Buckhannon.
No Democratic Nomination.

Wayne:—
W. F. Bruns, (R) Ceredo.
J. R. Booth, (R) Kenova.
Oscar Watts, (D) Ceredo.
James O. Marcum, (D) Ceredo, **For**

Webster:—
Okey M. Cogar, (R) Webster Springs, **For**
W. C. Cooper, (D) Webster Springs.

Wetzel:—
James L. Anderson, (R).
No Democratic Nomination.

Wirt:—
Carl E. McCoy, (R).
Hugh Prather, (D).

Wood:—
John B. Easton, (R) Williamstown.
A. J. Nicely, (R) Parkersburg.
W. L. McPherson, (R) Parkersburg, R. F. D., **For**
J. P. Duval, (D) Parkersburg, **For**
Geo. W. Dye, (D) Parkersburg, **For**
Mason N. Crook, (D) Williamstown.

Wyoming:—
I. E. Basham, (R) Pineville.
Geo. W. Sutherland, (D) Pineville.

FURTHER FALLACIES OF THE SHEPPARD-TOWNER PROPAGANDA

By WILLIAM C. WOODWARD
Chicago

Executive Secretary, Bureau of Legal Medicine and Legislation of the American Medical Association

[NOTE:—This is the second article on the Sheppard-Towner Law by Dr. Woodward].

1. *In support of pending legislation to authorize appropriations to carry the Sheppard-Towner Act into effect for two years beyond the date originally set for it to expire, it is urged that this is merely a temporary expedient, designed to prevent the loss of the money and effort already expended under the Act. The record shows, however, that is not the case. The extension of the Sheppard-Towner Act now sought, for two years only is merely one of a series of ex-*

tensions that will be sought if this extension be granted. In fact, proponents of the Sheppard-Towner plan regard the Act as permanent legislation.

In the report of the hearing before the Committee on Interstate and Foreign Commerce, House of Representatives, January 14, 1926, on H. R. 7555, the bill authorizing further appropriations for carrying the Sheppard-Towner Act into effect, on page 51, we find the following statement by Miss Grace Abbott, Chief of the Children's Bureau:

> "The committee is familiar with the fact that the legislation enacted in the maternity and infancy act is permanent; the only thing that is not permanent is the authorized appropriation for the five-year period."

In the Congressional Record, April 5, 1926, page 6725, the same view was stated by Representative Barkley, when he spoke in support of the bill:

> "My only regret is that this authorization is limited to two years. I would advise gentlemen of the fact that this is permanent legislation. The Sheppard-Towner bill is a permanent law. It only provided originally for a five-year authorization of appropriatons. This merely extends the authorization two years, but the law itself is permanent law. . . ."

The same view was adopted by Senator Sheppard, in the *Congressional Record,* April 14, 1926, page 7254:

> "As to the present status of the measure, let me add that, after consultation with the Budget Bureau and the President, the Secretary of Labor transmitted to Congress a recommendation for the continuation of the appropriations under the maternity act for two additional years. The act itself is permanent legislation."

It could not well be made clearer that the proponents of this legislation expect to keep the Sheppard-Towner plan as a permanent part of our Federal organization. But whether they do or do not plan to go that far, it is clear that they have no intention whatsoever of abandoning the scheme at the end of the two-year extension they now seek. For turning to the printed report of the hearing before the Committee on Interstate and Foreign Commerce, House of Representatives, we find the following:

> "Mr. Newton. Now this further question. Do you consider that the two years is sufficient?
>
> "Miss Abbott. Well, I do not consider it sufficent if it is to end at the two-year period. I did not think in asking that period of time that that was the intention either of the Secretary of (or) the President that there was to be no further extension after the two-year period." Page 12.
>
> . . . . . .
>
> "Mr. Lea. What time would you specify for certainty that, in your judgment, the United States should remain in this work?
>
> "Miss Abbott. Well, I do not want to specify for a certainty.
>
> "Mr. Lea. Do you think four years?
>
> "Miss Abbott. No; I would rather say five as the time that the Government would without question need to continue the work.
>
> "Mr. Lea. You are certain that the Government should stay in for five years?
>
> "Miss Abbott. Personally, I am; yes. But I am supporting the recommendation of the Secretary and the President for the two-year period, with a view to showing accomplishments and needs still existing at the end of that time." Page 14.
>
> . . . . . .
>
> "Mr. Rayburn. You would not hazard an opinion on just when you think you could recommend that the Government go out of this supervision?
>
> "Miss Abbott. No; because I think it is a factual thing. I am not a prophet, after all, as to when that condition may come to pass." Page 15.

With such testimony as that of Miss Abbott, the statement that has been made in support of the pending bill, that "there is no disposition to extend Federal cooperation beyond the next one or two years," is certainly without foundation.

2. *Attempts to justify an extension of the life of the Sheppard-Towner Act by showing the extent of activities in the field of maternal and infant hygiene since that act was passed are inadequate unless they show the results of such activities, and this they do not do.*

"Child-health conferences," "school conferences," "infant clinics," "institutes," "public talks," "patterns distributed," "milk letters, with instructions to mothers," and similar activities (*Congressional Record,* April 14, 1926, pages 7254-7272) are at best merely agencies to conserve health and life. Evidence showing only that such activities are going on does not prove that they are accomplishing that result. Such evidence is even further from proving that such activities are being conducted efficiently and economically, or that they are being con-

ducted under the Sheppard-Towner Act better than they could have been conducted by the states alone. The evidence offered is inadequate, too, to permit intelligent judgment as to the relation of such activities to the Sheppard-Towner Act, for such evidence very generally fails to show the nature and extent of similar activities in the same jurisdictions before the act was passed.

3. *The assertions that have been made that there have been substantial reductions in infant and maternal mortality, with the implication that such reductions have been due to the Sheppart-Towner Act, are not supported by the evidence.*

In the *Congressional Record*, April 5, 1926, on page 6720, in the argument of Representative Newton in support of the Act, the following appears:

> "Since the operaton of this act there has been a substantial decrease in both the infant mortality and the maternity death rates."

Representative Newton then submits tables showing that in the three Sheppard-Towner years, 1922-1924, inclusive, the infant mortality rate for the registration area fell from 76 to 72, and the maternal mortality rate fell from 6.8 to 6.6. Such a decline could hardly be regarded as "substantial." But even if it were, it could not be accepted as an argument in favor of the Sheppard-Towner Act; for during the three years immediately preceding, namely, 1919-1921, inclusive, the infant mortality rate fell from 101 to 76, and the maternal mortality rate fell from 9.2 to 6.8. Of course, we know that the improvement shown by the figures last stated was only relative and that the decline was great because of the high mortality due to influenza in the year preceding the triennium named and from which the decline is computed. But what the improvement in 1922-1924 was due to, and how long it will continue, we do not know.

As a fallacious argument offered in support of the Sheppard-Towner bill recently passed by the House, we find the following by Representative Barkley, in the *Congressional Record*, April 5, 1926, page 6725:

> "Taking the United States as a whole, in 1920, which was the year before the enactment of this law, the number of children who died in infancy amounted to 86 out of every 1,000 in the United States. In 1924, four years after the passage of this law, the death rate among children in the United States had been reduced from 86 to 71 per 1,000. This is a reduction of nearly 20 per cent in less than four years."

The Sheppard-Towner Act was not approved until Nov. 23, 1921. Obviously, its enactment could not have influenced the infant mortality rate for 1921. Why, then, did not Representative Barkley take the infant mortality rate for 1921 as a basis for comparison, instead of the infant mortality rate for 1920? The infant mortality rate for 1921 was 76. The decline, therefore, under the Sheppard-Towner regime was from 76 to 72. It was only 5 per cent in three years, not 20 per cent in less than four years as stated. And no evidence is offered to show that the Sheppard-Towner Act had anything to do with even such decline as did occur.

4. *Statements made to show the extent to which infant and maternal mortality are preventable, in support of an argument for the enactment of the pending legislation, are without adequate foundation.*

In the *Congressional Record*, March 31, 1926, page 6434, Senator Sheppard is quoted as referring to certain studies and investigations made by the Children's Bureau as follows:

> "It was found that nearly 20,000 mothers and almost 200,000 infants under 1 year of age were dying in the United States every year from lack of proper knowledge as to the hygiene of maternity and infancy."

As a matter of fact, according to the Twenty-fourth Annual Report of the Bureau of the Census, covering Mortality Statistics, 1923, published in 1926, page 126, there were in the entire registration area of the United States in 1923, only 166,274 deaths of children less than one year old, from all causes. The estimated popuation of the registration area was 96,986,371, and the estimated population of the entire continental United States was only 110,663,502. (See Report cited, page 8.) And yet, unless Senator Sheppard has misinformed us, investigations by the Children's Bureau disclosed the fact that almost 200,000 infants under one year of age die in the United States every year *from lack of proper knowledge as to the*

hygiene of maternity and infancy. If the reported findings of the Children's Bureau are correct, where do the extra 34,000 babies come from each year, who die from lack of proper knowledge? And where do all of the babies come from who die every year from other causes?

A similar discrepancy exists with respect to maternal mortality. In support of the Sheppard-Towner Act, the Children's Bureau is quoted as authority for the statement that "nearly 20,000 mothers . . . . . were dying in the United States every year from lack of proper knowledge as to the hygiene of maternity and infancy." And yet the Report of the Census Bureau, cited above, page 176, shows that the total number of deaths in 1923 in the entire registration area, containing nearly nine-tenths of the population of the continental United States, from accidents of pregnancy and labor, and hemorrhage, blood poisoning and other conditions incident to the puerperal state, was only 15,505.

5. *Comparisons between maternal mortality in the United States and maternal mortality in other countries, to the discredit of the United States, are not justified by comparable records.*

Referring to studies and investigations made by the Children's Bureau, Senator Sheppard, according to the *Congressional Record,* March 31, 1926, page 6434, said:

> "Reports from the birth-registration area of the United States showed that from 1915 to 1920 the death rate of mothers from causes relating to maternity was increasing. It was shown that the death rate of mothers in the United States from these causes was the highest for any nation in the world for which recent figures could be obtained, and that seven foreign countries had infant death rates lower than the United States."

The reason for the increase in maternal mortality in 1920 as compared with maternal mortality in 1915 is not hard to find. In 1920 many expectant mothers died from influenza, and their deaths were charged to pregnancy; in 1915, influenza did not contribute to such mortality.

But probably the most overworked figures that have been used in the support of the Sheppard-Towner propaganda are such as those referred to above, purporting to show an exceedingly high maternal mortality rate in the United States as compared with the maternal mortality rates in other countries. Concerning comparisons of that kind, the Bureau of the Census has this to say:

> "As already pointed out, the classification of deaths from puerperal causes differs greatly in different countries. Higher rates in one country than in another, therefore, do not necessarily mean higher mortality from these causes. However, as classification in a given country presumably differs but little from year to year, the rates do presumably serve as useful measures of mortality from these causes within the country itself.
>
> "Comparing the rates of 1923 with those of 1915, for puerperal septicemia, the United States shows the same rate for both years, England and Wales a reduction of 13.3 per cent in its rate, Australia an increase of 30.8 per cent, New Zealand an increase of 137.5 per cent, and Scotland the same rate for both years. For other puerperal causes, the United States shows an increase of 5.4 per cent; England and Wales a decrease of 7.4 per cent; Australia an increase of 17.2 per cent; New Zealand a decrease of 15.4 per cent; and Scotland an increase of 7.1 per cent." **Twenty-fourth Annual Report, Bureau of the Census, Mortality Statistics, 1923, published in 1926, page 64.**

Just what comfort Sheppard-Towner propagandists can get out of these figures is hard to see.

6. *Even if it could be admitted that infant and maternal mortality rates were as bad as the proponents of the pending legislation assert, and that it is as easily reducible as some of them claim, there is no evidence to show that preventive measures can be applied more effectively by the Federal Government than by the State.*

So far as is known, not a single advance in methods for preventing infant and maternal mortality has been made by the Children's Bureau since the Sheppard-Towner Act was passed. It has merely adopted methods devised and in use by the several states and cities of the country. Obviously, supervision and control of such activities over the entire land area of the United States, approximately 3,000,000 square miles, by a federal bureau in Washington, must entail a heavy overhead expense—or must be supervision and control on paper only.

The West Virginia Medical Journal

Directed and Edited by the Committee on Publication

[The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible]

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS:

WALTER E. VEST, Huntington — HARRY M. HALL, Wheeling — J. HOWARD ANDERSON, Marytown — C. W. WADDELL, Fairmont

MR. S. O. NEALE, *Secretary-Business Manager*, Charleston

Entered as Second Class Matter, January 1, 1926, at the Postoffice at Charleston, West Virginia

Volume XXII - NOVEMBER : 1926 *Number 11*

FURTHER OBSERVATIONS ON SPINAL BLOCK IN ACUTE CORD INJURY *

By CLAUDE C. COLEMAN, M. D., F. A. C. S. *Richmond, Virginia.*

IN a former paper a group of 14 patients with severe spinal cord injuries was reviewed and an effort made to show that the indications for laminectomy in such cases were based upon the demonstration of a spinal block.

The purpose of this paper is to emphasize the conclusions previously set forth and to call attention to additional observations which we have made in the study of a second group of 13 patients with similar lesions.

Our studies of spinal block in acute cord injury were begun in January, 1924. For six years previous to this time the test for spinal block had been used routinely whenever a spinal puncture was done for any purpose. Considerable familiarity with the behavior of the fluid column was thus obtained in a rather extensive experience with the test in various types of spinal cord lesions. It has been shown by numerous observers that the physical condition of the cord at the level of injury often cannot be determined by early clinical examination. The most that can be said of many cases of severe injury is that there is a complete physiological interruption, but clinical examination made within a few days after the injury is inadequate to determine whether the cord is crushed or whether the lesion is spontaneously recoverable.

The purpose of laminectomy for cord trauma is to remove pressure from the cord. If the cord is not compressed operation is not only futile but increases the damage to an already weakened spinal column. It is exceptional that cord compression can be determinated by clinical or X-ray examination. We have seen no roentograms which have clearly shown compression of the cord by small indriven spicules of bone. It is true that in a few cases of fracture dislocation, the extreme displacement of the vertebral segments is shown by X-ray examination and this may lead to the belief that the cord must either be greatly compressed or else divided.

* Read before the Southern Surgical Association, Louisville, Ky., December, 1925.

There is no particular surgical interest in the cases of cord trauma in which the evidence unmistakably shows that the cord has been completely crushed. We are greatly concerned, however, with the numerous cases of cord contusion without gross vertebral deformity but with signs of complete or almost complete physiological interruption. These cases may show an immediate complete paralysis from a physiological block and some of them may recover, provided the effects of compression are not superadded to the primary injury. It is of fundamental importance, therefore, to determine immediately after a severe cord injury the physical condition about the injured cord, particularly in reference to the space-restricting effects of the injury. It is possible to obtain such information by tests for spinal block as by the method of Queckenstedt or by doing a double puncture, according to the technic of J. B. Ayer. Proof of occlusion of the spinal subarachnoid space at the level of the injury is equivalent to the demonstration of pressure upon the cord.

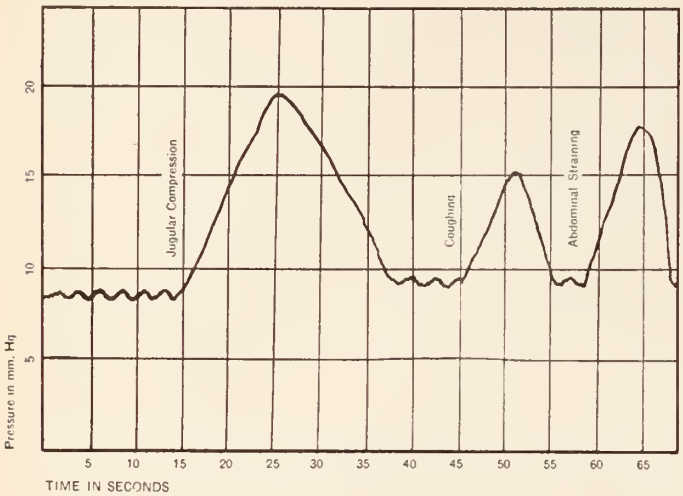


FIGURE 1—The manometric tracing in this case shows a normal response of the fluid column on jugular compression, coughing and straining. Note the variation in the fluid pressure for a time after the needle has been inserted and connected with the manometer. A sufficient interval should be allowed after the needle is inserted in the spinal subarachnoid space and connected with the manometer for the fluid to reach a steady level before making the jugular compression. Upon pressure of the jugulars the manometer shows a prompt rise with a more delayed fall. Coughing and abdominal straining produce a similar, though not as a rule such a marked rise. The reading in such a case indicates that the spinal subarachnoid pathway is entirely free. A manometric curve of this kind in a case of acute cord injury, with or without complete physiological interruption, would be good evidence that the cord is not compressed and operation would be futile.

In many cases the X-ray will show practically no vertebral deformity, there having been a recoil after the forces of dislocation had ceased to act. The swelling of the cord may be sufficient in these cases to completely obstruct the spinal fluid pathway, thus causing compression of the cord within a normal or slightly deformed dural canal. The effects of compression either in a normal or deformed dural canal leads to interference with the nutrition of the injured segments and further increases the injury initiated by the trauma.

Allen[2] believed that cord edema experimentally produced, reached a maximum in four hours, and after this period longitudinal incision of the injured segments was of little benefit in preventing the harmful effects of the edema. The damage to the cord, according to this theory, would be in considerable advance of its maximum swelling in many cases. In some of the cases which we have observed the swelling of the cord did not reach a maximum for more than 24 hours. This was determined by repeated tests for block, showing a gradually increasing obstruction which finally became complete. It is impossible to say that even further enlargement of the cord in these cases might not have taken place had it not been confined in a rigid dura. In one case the patient, while able to use his legs immedi-

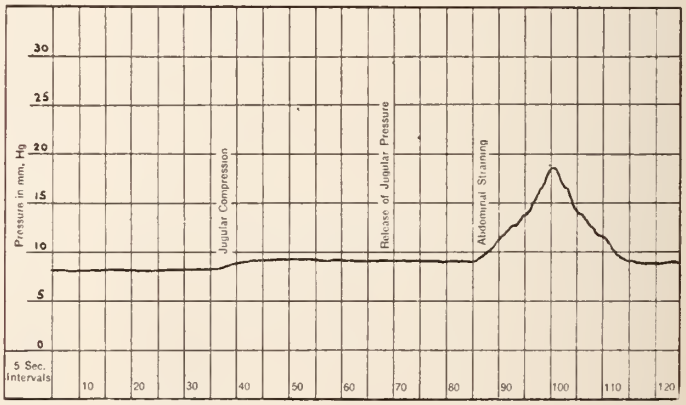


FIGURE 2—Fracture dislocation of lumbar vertebra I—conus lesion. Typical saddle anesthesia with involvement of bladder and rectum. Queckenstedt test shows complete block with slight rise on jugular compression and maintenance of the rise after release of jugular compression. Abdominal straining caused a prompt rise. Operation showed bony encroachment upon the spinal canal with obliteration of the subarachnoid space and obstruction of the fluid. Operation two months after injury.

ately after the injury, had in 24 hours motor paralysis, with the exception of a feeble movement of a toe of one foot. Such cases have been thought to be due to hemorrhage about the cord, and yet operation upon this patient showed that there was no extra-medullary hemorrhage and little narrowing of the spinal canal by bony displacement. The cord was found tightly compressed by the dural sac and incision of this membrane was followed by return of movement in the legs in 36 hours.

It is probable that we know very little about the pathological effects of edema of the cord and it seems unlikely that an arbitrary time can be fixed for destruction of the cord by edema. It is reasonable to believe, however, that a swollen cord incarcerated in the inelastic dura is more susceptible to the injurious effects of intramedullary edema than one with equivalent trauma over which the dura has been widely opened.

In the use of a refined procedure such as the Queckenstedt test, for the determination of a physiological response, great care must be taken in the application of the test. We have used the following technic in making the test: The patient is placed on a horizontal plane on either the left or right side, depending upon the preference of the operator. The skin area of the puncture is carefully anesthetized and an effort made to anesthetize deeply into the tissues between the laminae. The general dread of spinal puncture is founded more or less upon the painful experience to which the patient is subjected in attempting to do a puncture when the field has not been properly anesthetized. In making the Queckenstedt test it is very important to abolish general muscular tension and to have the patient avoid straining or holding the breath. These acts will cause the spinal fluid pressure to rise from a segmental backpressure into the spinal veins below the lesion. A rise of pressure on straining, general muscular tension or holding the breath if synchronous with compression of the jugulars might be considered as a negative Queckenstedt test and lead to an erroneous interpretation. After the needle is inserted into the spinal canal, delay of 2 or 3 minutes should be allowed before attempting to make the reading in the manometer. During this time it will be found that there is likely to

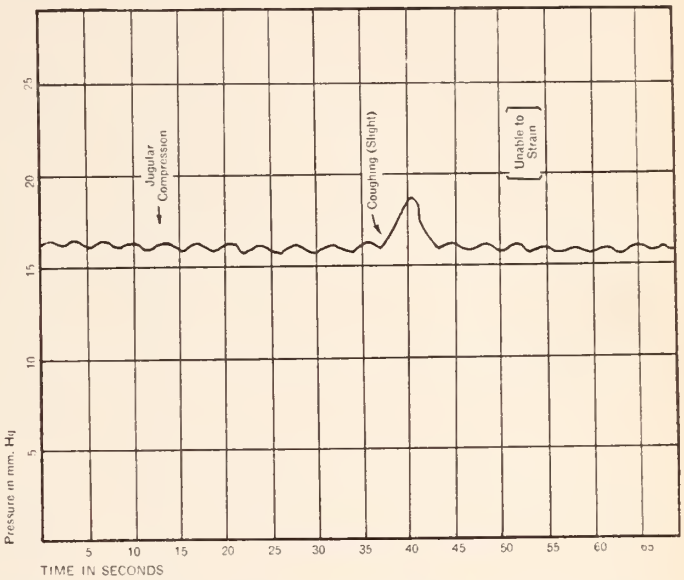


FIGURE 3—Fracture dislocation of dorsal vetebrae VIII and IX. Complete block demonstrated by Queckenstedt test. Coughing produced slight rise of fluid column which is to be expected in such a case. Complete physiological interruption. Operation showed that recoil of the vertebrae had not taken place sufficiently to relieve the bony pressure. This case is an example of a positive Queckenstedt with the cord practically destroyed. There was no gross vertebral deformity on X-ray examination.

be some fluctuation of the spinal fluid column. The patient may then be told to strain or cough which will determine whether there is a free communication between the spinal subarachnoid space and the manometer. After the fluctuation of the fluid column caused by this coughing or straining has ceased, pressure upon the jugulars (usually from behind) should be made. The patient must be assured that this will not be painful. When no obstruction exists a prompt rise of fluid will take place in 10 seconds. The height to which the fluid rises varies, but in our cases the rise has usually been on an average of about 10 mm. Hg. The height of the rise is reached in from 8 to 10 seconds. The fall of the fluid after release of the jugulars is not quite so rapid in the case without subarachnoid obstruction. When a complete block exists no rise of fluid in the manometer will take place upon compression of the jugulars. When the block is almost complete the rise is very slow upon jugular compression, and having once reached its maximum

height, it either falls more slowly or remains at the maximum elevation.

It is unnecessary to describe the behavior of the fluid column in lesser degrees of block. In the study of spinal cord tumor the interpretation of partial block is of the greatest importance, but in acute cord trauma a high degree of block should always be demonstrated before operation is done. We have operated upon no case of cord trauma unless the Queckenstedt test showed the block to be practically complete. It is important in every case of partial block to make repeated tests for the purpose of ascertaining whether or not the compression of the cord is increasing or receding. When the block becomes complete, operation should be promptly done. The tests for spinal block are just as essential in the determination of operative indication in the case of severe partial injury as in those of complete physiological interruption.

Many patients with old cord injuries and serious disabling sequelae if studied by methods which give accurate information as to local compression may be found to have lesions which operation may benefit.

In a series of 27 patients certain problems have arisen, because of the grave condition of the patient, as to the advisability of operation, notwithstanding the patient showed a complete block. The presence of a block, unless there is good reason to believe that the cord has been destroyed at the level of the injury, is considered an unequivocal indication for operation, but this indication will at times be set aside by the judgment of the surgeon. Serious associated injuries and hyperthermia, particularly in cases of cervical injuries, may cause the surgeon to adopt a conservative attitude although the demonstration of a spinal block shows that the cord is compressed.

In view of the fact that these operations may often be done under local anesthesia, it is probable that certain cases formerly considered unsuited to general anesthesia because of associated injuries or hyperthermia, might be operated upon if pressure upon the cord can be demonstrated.

In conclusion I should like to emphasize the gravity of severe spinal cord injury. The primary damage to the cord is frequently of a destructive nature, and operation is of no benefit when the cord is crushed. There are some cases, however, with severe contusion and physiological interruption which would undoubtedly be benefited by offsetting the effects of compression which may be added to the original injury.

We believe that the test gives positive information as to the local condition about the injured cord and supplies the evidence necessary to determine whether or not laminectomy should be done.

The tests for spinal block in the series upon which the paper is based, and the accompanying charts were made by my associates, Drs. J. G. Lyerly and E. J. Morrissey.

1. Coleman, Claude C., Determination of Local Compression as an Indication for Laminectomy in Acute Injury of the Spinal Cord.—Journal A. M. A., Oct. 10, 1925, Vol. 85, pp. 1106-1109.

2. Allen, A. R.: Journal Nerv. and Ment. Dis., September, 1911; March, 1914.

SOME GYNECOLOGICAL RULES

Frederick C. Holden, the Dept. of Gynecology, of Bellevue hospital, New York, out of the experiences of that institution deduces several valuable practical principles, some of which are the following:

Gynecological operations are often performed without sufficient study. Careful survey has reduced their operative incidence to 21.82 per cent.

The uterine curette is too frequently and indiscriminately used. They curetted only 127 out of a series of 3,132 cases.

The outstanding points in treatment of sepsis are individualization, nursing, gastrointestinal hygiene, and blood transfusion.

When operation for adpingitis is necessary, it is never undertaken until temperature and leukocyte count have ben normal for three weeks.

Cautery treatment has greatly diminished the necessity for cervical surgery.

Supracervical hysterectomy is their preference for symptom-producing fibroids, although X-ray has a definite but limited field.

Radium and X-ray have superseded the knife in carcinoma. (*Bulletin of the N. Y. Academy of Medicine,* May, 1926, p. 243.-

ACUTE POLIOMYELITIS *

By H. A. WALKUP, B. S., M. D.
Mount Hope, W. Va.

IN taking up Acute Poliomyelitis, realizing only the hope of stimulating study of this subject, I will present it from this standpoint; pathology of the nervous system; public health aspects; Poliomyelitis, the orthopedic problem; foreign and American views; cases treated by Rosenow's serum; and report of local cases.

The lesions of the nervous system produced by poliomyelitis involve both ectodermal and mesodermal tissues; the most striking clinical feature—the flaccid paralysis—is due to the involvement of the anterior horn cells, but poliomyelitis is not to be considered as a disease affecting the anterior horn cells, or even the anterior gray matter primarily or exclusively, for oftentimes the mesodermal tissues—the pia, blood vessels, and lymph spaces—are predominantly involved. Neither are the lesions found in the spinal cord alone, for almost every fatal case shows evidences of an extension of the inflammatory process in the brain stem and often, also, to the cerebrum. Many patients have symptoms pointing to involvement of the cranial nerves, and in some the process is essentially bulbar, pontine, or mid-brain, giving pupillary changes, extra-ocular paralysis, ptosis, nystagmus, facial paralysis or difficult respiration and deglutition. A more accurately descriptive term would be therefore polioencephalomyelitis. Whether the polyneuritic-like symptoms are due to a true neuritis or to a posterior root ganglion inflammation, or central in origin, is not known. However, the process most commonly involves the lumbo-sacral region of the cord; and this localization gives the characteristic clinical picture.

The gross changes usually are not very marked, though some times conspicuous. There may be noted macroscopically hyperemia of the meninges, spinal cord or brain; occasionally there are hemmorhagic and necrotic areas.

Microscopically, the usual picture is an inflammatory process with mononuclear-celled infiltration of the leptomeninges extending into the anterior fissure and along the pial processes and vessels into the cord where there is perivascular infiltration, engorged vessels, glial proliferation, and chromotolysis of the ganglion cells.

It has never been possible to enforce a law that is not approved or not understood by the people whom it affects, and health regulations are or no avail unless supported by a sufficiently strong public sentiment in their favor. The most potent single factor in creating proper public sentiment that shall operate in the control of preventable diseases is the influence that may be wielded by the individual physician.

Important factors concerned in the dissemination of poliomyelitis are not yet clearly known, especially the role of healthy human carriers.

A few moments in a history of medicine and we can trace this disease, beginning with the early Egyptian times down to the present moment, and refer to its experimental production in monkeys, the recognition of a filterable virus, the presence of immune substances in the blood of convalescents, the diversity of the virulence of various strains of the virus and recognition of the virus in various parts of the bodies of persons dead from the disease.

A consideration of the fact that immune bodies have been found in 66 per cent of persons who have been in close contact with cases, of the large number of abortive cases, and those showing, during an epidemic, a great diversity of symptoms without paralysis, leads to the assumption that the disease and a resulting immunity is probably infin-

* Read in the Section for Internal Medicine, fifty-ninth annual meeting of the West Virginia State Medical Association, Morgantown, W. Va., May 26, 1926.

itely more widespread throughout the population than has formerly been suspected.

Patients are to be isolated in the acute stages in much the same way that typhoid cases are, with the similar precautions regarding the body discharges. Nose and throat sprays of antiseptic solutions are useless, in that they do harm in removing a natural protective substance in the nasal secretion which neutralizes the virus of the disease. The most efficient agency of control of an epidemic is the public health nurse. The closing of schools is advised against. A study of the 1925 epidemic of poliomyelitis in California showed that the number of cases of the disease was greatest about the first week in August and in spite of the return of over 200,000 pupils to school at that time, the number of cases in the succeeding two months steadily diminished.

From the time when the diagnosis is made, two problems are presented: to prevent deformity, and to secure the maximum amount of terminal function. The amount of residual paralysis will depend upon the extent of damages to the anterior horn cells of the spinal cord. We have no means of influencing this, except by keeping the patient absolutely quiet. Massage, electricity, and the various other procedures of physical therapeutics are useless. They may be actually harmful in early stages.

During the early stages our sole purpose is to prevent deformity. Deformity is the result of gravity and of imbalance of muscle. If all muscles of a limb be paralyzed we have little to fear of it, but with the return of some of them to function, active measures of prevention become necessary. If nothing be done, the active muscles shorten and produce contractures and subluxations.

In the lower extremities the most common deformity is a foot drop, from paralysis of the anterior leg group. The tendency to deformity is increased by the weight of the bed clothes. To forestall we apply some form of splint. We have little to fear at this time from contractures of other muscles. The recumbent posture and the bed clothes prevent flexion contractures of the other joints.

As the patient begins to go about, other contractures must be prevented. The treatment at this stage is more active than in the earlier stage. The object is to preserve the full range of motion of the joints in the direction of the paralyzed muscles and to get the greatest possible function by the remaining sound muscles.

After the acute stage of the disease, we get the patient up, and by exercise and training let him learn to educate his remaining muscles to perform their maximum amount of function.

At the end of about a year we shall know about how much permanent paralysis confronts us. In the less extensive cases we may proceed on the same lines. When growth has been attained, the tendency to deformity usually ceases. For cases of medium severity various operative measures have been proposed to stabilize the joints.

Tendon transference is often useful if we know its limitations and understand its technic. It is of little good to perform elaborate operations if the patient cannot use transferred muscles to move his limbs.

With a paralyzed quadriceps extensor cruris, the patient often learns to superextend the knee in walking, thus locking it; attaining a fair degree of function. If not, then a stiffening operation is advisable. Operation for stiffening the hip are not usually very satisfactory. For an unstable foot I prefer Whitman's astragalectomy. Involvement of the trunk muscles may cause a marked rotary-lateral curvature. Its treatment is difficult.

In this paper I hope to review the salient points in connection with infantile paralysis as an aid to the practitioner, who, because of the relative infrequency of the disease, is not familiar with it.

The disease usually begins with a sudden onset; there is commonly fever of a moderate degree which lasts for three to four days. The child is often drowsy and complains of a headache and pains in the limbs, which may suggest rheumatism. Movement accentuates the pain. Vomiting and diarrhea are sometimes observed. The neck may be stiff and even retracted. In the drowsy condition the child may pass urine and feces involuntarily, but even when such drowsiness does not exist loss of control over the sphincters

or retention of urine may be present for several days.

Another type of onset is recognized in which the child goes to bed in perfect health and on the following morning a flaccid paralysis of one extremity is noticed.

A diagnosis of infantile paralysis is rarely made in the first phase of the disease, since the condition can only be recognized by lumbar puncture and the aid of a pathologist. Even the fluid in infantile paralysis usually resembles that found in tuberculous meningitis. Draper has stated that from 50 to 80 per cent of all cases of infantile paralysis abort and do not go to paralysis. If this is true, it can be readily understood why the disease spreads and how difficult it must be to control because not half of the cases are reported.

The prognosis as to life varies in different epidemics from 10 to 25 per cent. There is no set rule as to whether the paralysis will spread. In nearly all the cases a certain amount of spontaneous improvement will take place as the tenderness is leaving.

Serum treatment may be instituted, firstly with serum obtained from the blood of those who have recovered from the disease, and secondly from immune horse serum as prepared by Rosenow.

Rosenow's serum is prepared by repeated injections of increasing doses of freshly isolated strains of pleomorphis streptococcus. He says it has a curative power in poliomyelitis, especially when given in early stages.

In the acute stage then in the absence of a serum the less you do the better. Let the child lie in bed in the position it finds most comfortable. Give plenty of water. Splinting in the early stages may greatly aggravate the child's sufferings.

Later when the acute stage is passing off, to prevent contractions and over-stretchings splints of some kind must be applied. For the foot, leg and thigh nothing is more comfortable than a properly made plaster of Paris mould. In some cases quite in the early stage a plaster splint seems to give relief when applied to the lower limb and it enables the child to be moved without pain.

In from six weeks to two months or more (the time varying in each individual case), but as the tenderness is passing off gentle massage and muscle training may be started. However, it must be discontinued if it causes pain. No heavy massage is ever required.

Great advances have been made in the surgical treatment of infantile paralysis in the last decade. But the surgeon must stay his hand and not be too eager to rush in until it is certain that no further improvement will take place and that the area of persistent paralysis can be definitely determined.

In poliomyelitis the history is of minor importance; it may be general and does not throw much light on the condition. The story which the patient afflicted with infantile paralysis gives, is typical of a systemic infection masquerading either as a gastro-intestinal infection or as a minor respiratory ailment. It is the history of a few days indisposition, accompanied by a temperature of 102 to 103, and followed by an apparent complete recovery. So short is the attack and so marked the apparent initial recovery that even the tenderness which begins two or three days later is overlooked and given slight consideration. Any acute illness in a young person occurring between June and November ought to suggest poliomyelitis; indeed it should be considered so until the disease has been definitely eliminated.

The most important aid in making the diagnosis of infantile paralysis is that obtained from an examination of the spinal fluid, which at the beginning of poliomyelitis is clear, colorless and almost normal; there may be a slight increase in pressure. In a few days, however, there is a considerable change. The globulin reaction gradually increases and in the third week reaches its maximum. The most significant change, however, is the number of cells. These rapidly increase, especially those of the mononuclear type. They may number hundreds or even thousands. Hence, the value of a lumbar puncture is apparent, and should not be neglected in an apparently unimportant illness in the summer in a young patient, for these are the types of cases which represent the mild non-paralytic or abortive form of infantile paralysis.

The New York State Department of Health has made a classification of the disease based

on the pathological anatomy. There are four types; the non-paralytic or abortive type; the ataxic type; the cortical type; and the ordinary spinal or sub-cortical type.

The first type includes the very mild cases in which there is practically no paralysis or motor disturbances, but in which there may be an involvement of the meninges.

In the second, the ataxic type, are included those cases in which the lesion involves the cerebellum, Clark's Column, and the ganglia between the vertebrae.

The third, the cortical type, is that in which spastic paraplegia results. This third or cortical and the second or ataxic types are both rare.

The fourth, the ordinary spinal or sub-cortical is the most common form. It is the one which is most frequent and the one which is self evident. The lower motor neurone is affected and there results a flail extremity with subsequent atrophy and more or less paralysis.

The disease attacks the nervous system particularly in the anterior horns, which are the centers for controlling the motor functions. Thus, when they are affected there will be more or less paralysis. They are the centers for the reflexes and form a part of the reflex arc; thus when they are affected there will be a loss of reflex. Since they nourish the muscles when they are affected the muscles will become atrophied. The disease affects the anterior horn cells to only a very slight degree so no sensory disturbances are evident. There is no anesthesia but since the disease is a systemic infection it involves to a slight extent the whole nervous system and there will be an irritation of the posterior horns and the patient complains of slight tingling and tenderness.

Other symptoms involve the meninges, the cerebrum and the cerebellum. Thus in some cases there will be found rigidity of the neck, coma, and Kernig's sign; if the cerebellum is affected there will be ataxia, and an affection of the cerebrum causes irritability, hyper-excitability, apprehensiveness or stupor.

The paralysis is central, and because it is the spinal cord segments which are involved, the paralysis is irregular in distribution, and incomplete because most muscles receive their innervation not from one particular segment alone, but from adjoining cord segments.

The pathological changes which occur in this disease consist of congestion, which is accompanied by an exudate, hemorrhages, edema and anemia, resulting from pressure upon certain vessels and finally a change in the nerve cells, which change is brought about by the toxic action of the virus. There are varying degrees, so that in some cases pathological changes are slight, in others moderate, and in the more severe cases, extensive.

There are many conditions from which infantile paralysis must be differentiated. The most difficult differentiation is between anterior poliomyelitis and tubercular meningitis. These two conditions have many symptoms in common, but the final differentiation may be made from an examination of the spinal fluid. In the meningeal condition there is an increase of the sugar content, whereas in poliomyelitis, this remains constant.

The prognosis is very difficult. According to Lovett, 25 per cent recover completely. Unless the attack is exceptionally severe which is evident at once, the patient will live. One is safe in saying only that there will be a recovery, which will be more or less complete, that it will begin when the tenderness subsides, but as to how far it will extend, time alone will show.

From the American view it may be well to divide the treatment into three groups according to the stage of the disease: the acute stage, the convalescent stage, and the chronic stage. In the acute stage it is advisable to avoid drugs and give the inflamed nerve cells an opportunity to recover. Thus rest in bed, nourishing food and a cheerful environment are the outstanding points of treatment in this stage. As long as the muscles are sensitive the acute stage exists, and rest alone is indicated. Positive harm can be done in the first stage by massaging or by trying to stimulate the sick muscles.

Many good authorities advise against the use of serum in the acute stage, for while they are of the opinion that a great deal of

harm will not be done, they have yet to see very good results. If used, use it early.

When the tenderness of the muscles has subsided the patient passes into the convalescent stage. In this stage the treatment is one of stimulation and re-education of the muscles. Massage will improve nutrition, keep up muscle tone and diminish atrophy. Care must be taken not to give massage to a point of fatigue or the muscle will be overtired. Electricity is of some help, but not nearly so important as muscle training. Deformities must be corrected so that stretching of ligaments will be averted. If necessary keep limb in normal position.

The treatment of the chronic stage belongs to the orthopedist and has been taken up.

The time is near at hand when serum treatment will be pushed to the front and for that reason some of the findings of Herbert Sugg in the Iowa Journal will be taken up. A series of 37 cases of poliomyelitis using Rosenow's serum as treatment in order to determine its efficiency in this disease, there were 18 cases between three months and five years; 13 cases between six years and 15 years and six cases between 16 and 25 years. The acute symptoms were as a rule moderate, 25 being so reported, eight as slight and four severe.

Fever was usually moderate there being only a few cases as high as 104. The average was almost 101. The outstanding symptoms were neck rigidity, lassitude, muscular soreness, nausea and vomiting and pain, the last more particularly when the patient was handled. Constipation was present in nearly half the cases but it is a question what, if any bearing it had on the diagnosis. Hyperesthesia was frequently present but has probably been recorded more often as muscular soreness. Patellar reflexes was so variant as not to be reliable, Babinski's and Kernig's were present in only eight and six cases respectively. All suspected cases were interrogated as to evidence of involvement of the central nervous system and every case showing these symptoms was submitted to immediate spinal puncture, the diagnosis resting on the spinal fluid findings. The duration of acute symptoms was not usually over four days; in two cases it was ten days.

Serum was given as soon as diagnosis was confirmed and 26 of the 37 cases had the serum before the end of the second day; 13 of the 26 cases within one day or less. The rapidity with which paralysis supervened was characteristic, 11 being paralyzed within 24 hours and all who developed paralysis presenting it within four days. Nineteen were paralyzed before serum could be administered, six being slight, four moderate and nine marked. Only five cases developed paralysis after the administration of serum.

Spinal puncture was performed on 26 patients, 15 being done on the day of onset or the next day, early spinal fluid findings always being urged. The cell count in those diagnosed as poliomyelitis was from six cells to 700 cells. A cell count of less than six cells was disregarded and only one case with a cell count as low as six developed paralysis. This particular case developed paralysis of one leg the next day. Serum was immediately administered and the following day the child got out of bed and walked across the room. He made a complete recovery within 48 hours, from the date of first treatment.

Rosenow's serum was administered in every case and usually intravenously, dosage being regulated by age and severity of the symptoms. Simple injections ranged from 10 c.c. to 35 c.c. Seldom were less than three injections given but three cases had five. The intravenous injections were always given slowly, 1 c.c. per minute. Only four developed any immediate serum reaction. All but three or four had a late serum rash. Usually it was severe. Outside of extreme discomfort lasting from one to four days no untoward results appeared. Soothing lotions were used and in a few cases adrenalin was administered.

There were no deaths in this series and 20 of the cases had a complete recovery. The remainder were benefitted but had paralysis of either face, arm or legs.

As to etiology Sugg is of the opinion that in a widespread epidemic many if not most, of the inhabitants harbor the causative germ, probably in their upper respiratory tract and the reason so many escape is because in relatively few is the nervous system susceptible to the infecting agent.

Rosenow's serum was used in all of the 37 cases treated. Drugs were used for the relief of pain, restlessness, constipation and fever. The serum was given freely and as early in each particular case as possible.

Success depends on early diagnosis and prompt treatment. Besides examination of the spinal fluid, an immediate intravenous injection of serum is demanded. Diagnosis must be made early on physical signs and spinal fluid findings. If paralysis supervenes before instituting treatment the best opportunity to effect a cure is lost. The serum is of doubtful value in cases paralyzed for several days. Serum should be used, but the opportunity to effect a cure lessens with each hour's delay after paralysis comes on.

Six cases occurring in Mount Hope, W. Va., a small town of 2700 people, in August and September, 1925, ran courses as above described and all recovered except one. This child had paralysis involving both legs and arms, one side of face and part of chest muscles. Now eight months out this child is walking by the aid of a leg brace on left leg. The left arm was paralyzed except for motion of the fingers. One side of face is improving. This case was referred to Dr. A. S. Jones of Huntington, W. Va., who will follow up and offer the best chances for the greatest improvement. The fact that this child lived at all is a matter of great interest.

DISCUSSION

DR. R. A. ASHWORTH, Moundsville:

I am much interested in this paper. I am sorry that Dr. Walkup did not have more time, so that he could have let the points he made soak in. You will notice in this short paper he gave us the history of the disease, gave its symptoms and its etiology, discussed its histology and pathology, discussed the diagnosis and prognosis, discussed its public health aspects, discussed the orthopedic side of it, gave us some American views and some foreign views, and discussed the whole subject thoroughly.

Some of the diseases we treat are easily treated and easily controlled, and in the case of other diseases we get into a real battle. One of the latter is acute poliomyelitis. Some of you remember our Fairmont meeting, when there was quite an epidemic. We have not made much advance in the treatment since that time except from the orthopedic standpoint. The orthopedists are getting better results. The fellow in charge of that hospital in those days advised us to use the serum from a former patient. As I recall it, he did not use Rosenow's serum. It is a baffling proposition. I remember a few years ago in Moundsville where a child was in contact with many other children and only one case resulted. About 66 per cent of the children exposed by direct contact have immune bodies found in their system upon examination. I was impressed by something that a doctor from Fayette County was telling me. He had a case in his own family, and in the family of five there was only the one case of infantile paralysis. We ought to be watching all the time for this disease. If we could follow out Dr. Walkup's treatment and suggestions and absorb the different things he discussed in this paper, we should be greatly benefited, for we should be brought right up to date on the literature and the present status of acute poliomyelitis.

DR. M. L. BONAR, Morgantown:

I think in the consideration of almost any disease the antiquity of the disease sometimes might be exceedingly interesting. The antiquity of this disease is very interesting. I thought I would find out something about it. I went up on the Pyramids around the Sphinx and found no contributions at all. In their mummies the ancient Egyptians have many contributions to offer on articular rheumatism, but nothing on this disease. I found nothing through all the ancient and middle ages until two years after the surrender of Cornwallis. Not until recently did I find anything. That suggests that it is a recent thing. The physician who attended the Princess of Wales in 1784, made a contribution. He wrote about something which he called the debility of the lower extremities. That was passed up until 1835, until Dr. John Badham published an article in the Medical Gazette on the paralysis of childhood and cited four cases in which we see definitely the appearance of acute poliomyelitis. What were the causes? The causes given were teething and weaning. Then a man over in

Germany, Jacob Heine, published a monograph in 1840. He was a man who made all kinds of appliances and splints. Later he published another article. He was the man who suggested the condition which we think is the pathology today, that is, a nervous condition. Then we pass on to 1870, when Medin, at Stockholm, gave us some information concerning it. Not until 1909 did we have proof that these organisms could be transmitted from one animal to another. Four years later, in 1913, an organism was described by Flexner and Noguchi as the cause of this disease.

Apparently this is a disease of very recent origin.

DR. S. S. WADE, Morgantown:

I am very much interested in this paper today, my interest being perhaps based on the fact that I have had this disease in my own family. In 1917 I had a bunch of little children, and there was a great deal of excitement about poliomyelitis. I sent them out into Cheat Mountain, where you could hardly see out unless you looked straight up. So far as I am aware they never left the locality, unless they went down the river to a chocolate stand to get something to eat. My wife tells on me that the baby got sick one day and was sick for several days and finally awoke one morning unable to move her legs. Then they came home. I had an able man come from Pittsburgh, and he said it was anterior poliomyelitis. The next older child was sick, running a very high fever, and we thought she had the same thing. Another child, four years old, later developed fever, and we put her to bed. The doctor gave us good attention; he came from Pittsburgh to see us every second day. (In the meantime I think I was after him about every second hour.) Finally I said to him one day, "Dr. Price, if this second child of mine were in a family outside, I would say it is typhoid fever." He took a blood specimen and did a Widal and found it positive. The older child proved to be an abortive case. The middle child had one of the worst cases of typhoid fever I ever saw, but is living and well today. The first child has paralysis of the anterior leg muscles and has a little toe drop. She has grown tall and has a slight drop of the tendons on that leg. She has had no operation except serving of the tendo Achilles because of stiffening, but we have been careful; we have taken constant care. She does not wear a day splint, but does wear a night splint. It is the constant, every day attention to these cases that is required in order to avoid the awful deformities, the contractions that occur because the cases were not taken care of daily by the treatment with splints. I think that is our hope for the prevention of these awful deformities, and I want to commend the doctor heartily for insisting on and stressing that point.

DR. A. A. SHAWKEY, Charleston:

I had the good fortune in 1916 to spend a period of several months in New York City during the epidemic of poliomyelitis there. One of the things that was noticeable was the method of spread of the disease. It was very apparent that it spread along every avenue of communication, motor roads, railroads, etc. Yet in almost every family there was only one case, even in the East Side tenements. That is a peculiar thing and should be kept in mind.

Another thing that should be borne in mind is that active treatment in chronic form should not be begun at too early a stage, and the gentleness with which that treatment should be begun and carried on in the early stages—very, very gentle massage and the lightest electrical current that will produce a contraction.

Rosenow's serum offers great hope to us, though it is difficult to get in small places except in epidemics. It is essential to make an early diagnosis in order to get the best results from it.

DR. WALKUP, closing the discussion:

In preparing this paper the first mistake I made was in attempting to take in too much territory.

Dr. Ashworth and Dr. Bonar brought out some excellent points in their discussion. Dr. Wade made a wonderful point. He is not the only physician I know here that has had this disease in his own home. A physician from my own county had a similar experience.

Dr. Shawkey brought out a very interesting point about the routes of infection, or

scattering of infection along the highways yet there are immunities in certain people, for not everyone in a family takes it when exposed.

I think we should encourage in every community laboratories capable of taking care of these things, i. e., serological work.

As to the serum—the Rosenow's serum and the serum from the blood of patients who have had the disease, fine work has been done on them, but we have not yet a practical serum.

We hope to stimulate the study of this subject. Let some member of this audience come back here next year with the right serum and put West Virginia on the map. We are just as capable as the men in any other state, if we get into the matter with the right enthusiasm. The reason why this topic struck me so forcibly was that last year I was in a community where they had never had this disease before, and in ten days' time we had five or six cases. This year we have been drafting our forces, preparing for war, looking for fifty cases or maybe a hundred. For this reason I brought up this subject, for you may have in your community the same condition that will exist in ours.

PELVIC VARICOCELE *

By MAGNUS A. TATE, M. D.
Cincinnati, O.

A DILIGENT STUDY reveals that the literature on pelvic varicocele is very meagre, even our latest text books give it only passing notice.

I find that Richet in 1854 was the first to make a careful study of the pelvic veins, and it was he who later called our attention to the tubo-ovarian varicocele.

In America, Dwight of Boston reported the first case, in 1887, and one year later Palmer Dudley of New York published his classical paper with a report of four cases. Since that time a few papers and case reports have appeared, and in 1924 Polak and Phelan published a very thorough and concise resume under the tile "Pelvic Varicosities—Vericocele Pelvica."

Veins have three coats, the same as arteries, with this difference that the muscular development is not so pronounced, and that they have valves. We define varicose veins as veins which are permanently dilated, and brought about by changes within their walls. First there is a thickening and an hypertrophy of the muscular and elastic fibres, in their effort to compensate for the increased tension. Later the muscular and elastic fibres atrophy and almost disappear, hence a pouching and sacculation of walls. Even the valves atrophy, leaving only the fibrous stumps. This so-called fibrosis spreads to the perivascular sheath and adhesions form.

In some vessels and parts of others, there may be such a proliferation of the intima, that the entire lumen of the vessel is obliterated.

In those cases where thrombi occur, calcic infiltration may take place, and the so-called venous calculi or phleboliths are formed. These veins not only sclerose, but elongate (much more so than do the arteries) and become tortous and convoluted. Coincident enlargement of the ovary is common.

Anatomists describe five plexuses of veins in the female pelvis; the vaginal, uterine, vesical, hemorrhoidal and pampiniform.

The peculiarities of the pelvic veins are: (1) their abundance; (2) their lack of valves, and (3) the fact that the ovarian vein on the right side empties into the vena-cava, and the left into the renal vein, hence more congestion is usually found in the left pelvic region.

A valve is sometimes described in the upper part of right ovarian vein. Lawson Tait called attention to the third edition of Gray's anatomy, in which valves are said to exist

* Read before the fifty-ninth annual meeting of the West Virginia State Medical Association at Morgantown, May 27, 1926.

in the ovarian veins, but this however is contrary to present views. There is little or no muscle, fascia or integumental support to the ovarian veins; they are constantly under gravity pressure (with the woman in the erect position), hence the tendency to overdistention, especially under stress.

Dudley was led to study the subject of pelvic varicocele by the following statement made by Dr. H. C. Coe: "These thickenings, increased tension and whatever this is, which we find at the examining table and promptly enter into our case books as cellulitis, frequently vanish after death when the natural tension of the tissues has disappeared. What pathological condition can exist in the broad ligament during life, giving rise to pain, and symptoms simulating cellulitis, and still be found absent in post mortem?"

Skene states that pelvic varicocele is a condition of middle life, that he had never seen a case under 25 or over 60, hence he believes that menstruation and child-bearing are the principal causes.

Following a labor after the uterus has expelled the child, placenta, membranes, amniotic fluid and blood, there is a decided contraction and retraction of organ, so that the venous circulation is often obstructed, and these vessels which were greatly overdistended may remain permanently dilated. This is often intensified when the uterus has been overdistended by twin pregnancy or hydramnois, for the unsupported uterine veins are naturally greatly elongated.

Richet in 1860 called attention to the fact that the utero-ovarian plexus in little girls who had never menstruated was but slightly developed, but following menstruation, and especially after a pregnancy, the plexuses were greatly increased in size. That some cases may be of congenital origin, is very questionable.

Practically all writers believe that pelvic varicocele occurs more often than is generally supposed, but agree that it is rarely diagnosed.

Darnell however reported ten cases that came under his care within the space of one year.

Attempts have been made to classify the cause into divisions—namely, constitutional and mechanical (Dudley); on general and local. All agree that any factor which produces a congestion of the pelvis predisposes to a pelvic varicosity.

Under the following headings a summary of causes is given: Poor health with its body toneless and general relaxation, disease of vessel walls—habitual constipation, uterine displacements, intra-abdominal pressure, pregnancy, subinvolution — traumatism by forceps, abortions, operations upon cervix and diseases of pelvic organs.

C. A. Castano made the following statements whch I copy verbatim as they are most interesting:

"He noted the symptoms of patients who formerly had been regarded as hysterical and who had passed through various hospitals to claim alleviation, but gynecologists had not been able to find visible lesions corresponding to the subjective symptoms described by patient.

"All our patients who suffered from pelvic varicocele, were syphilitic, gave a Wasserman frankly positive, with high lymphocytosis over 40 per cent. They all presented congestion.

"We found that these girls had done too heavy work during puberty before the menses appeared, especially true as to those who belonged to the inferior class. These girls worked in factories or stood almost all the time or spent their evenings in sewing.

"In the other social class the girls did unsuitable school work, sitting in the school bench with their backs in a forced position without support of any kind, or studying piano five or six hours a day.

"From early life they were carnivorous, did not care for their intestines and were always constipated, and with these predisposing conditions, a lot of causes were summed up which conduced to congestion. Syphilis is the cause of congestive predisposition, it conduces later on to sclerosis of the uterus and accompanies the congestive state.

"This congestive condition found in varicocele is accompanied by changes in all the glands of intestinal secretion, and we know that no infection could effect the secretory

function more than syphilis. Accordingly, I consider syphilis to be the cause of the congested pelvic condition, the internal glandular changes being secondary to it.

"Schlerotic tissue encircles the veins and produces a sort of periphlebitis, which involves the adjacent nerves, and here we have an explanation of the pains, the neuritis of varicocele."

The symptoms at first are likened to those of varicocele in the male. A pain which becomes dull aching in character increases when patient is in the erect posture, and is greatly ameliorated when assuming the recumbent posture. This pain later on does not remain in the pelvis, but extends up to the side towards the kidney region.

Kelly tritely puts it, "Tired and dragged out with a weight and fullness in pelvis during the day and a feeling of refreshment upon arising in the morning."

Castano lays stress upon the four principal symptoms, namely, "dyspareunia, erotic pains, dysmenorrhea, and leukorrhea of the hydrorrhea type, also at times abundant monthly courses of the menorrhagic type with the reflective symptoms of the vesical and rectal tensemus."

Practically all cases reported more or less menstrual disturbances, dysmenorrhea, menorrhagic dyspareunia, leukorrhea and increase of pain a few days before menstruation, which often is described as gnawing in character.

Most cases of diagnosed pelvic varicocele have been brought about by exclusion—the ruling out of various other pelvic conditions. Practically all cases reported have been in multiparous women who following a pregnancy have had a sub-involuted uterus, lacerations or displacements.

The history after pregnancy of characteristic menstrual disorders, leukorrhea and pelvic pain, is suggestive. Associated varicosities of vulva, thighs, and legs and a congested bluish tint to vagina, especially when patient is in erect position is also suggestive.

Bimanual examination elicits tenderness in uterus and fornices, and at times rather a doughy sensation to finger. A digital rectal examination after the patient has been asked to stand for some time, may give a distinct feel of the varicosities in broad ligaments, when upon her again assuming the recumbent position with the hips elevated, these masses disappear leaving the full doughy feel to the fingers. X-ray so far has been more of a detriment than an aid, for when pleboliths are present they show dark well marked outlines which have been mistaken for stones in ureters.

It is reported that in patients recently delivered under some undue strain, one or more of these thin walled dilated veins may give way, causing a frightful internal hemorrhage. The same condition is also mentioned in the non-pregnant, where great hemorrhage has taken place into the general peritoneal cavity.

Bernitz and Goupil report two such cases, and so have a few others. Such cases are likened to rupture in ectopics and it is readily conceived that surgical intervention gives the only chance for saving patient, unless she has been so fortunate as to have the rupture take place into the broad ligament forming a haematoma, which can be attended to later.

The profession has not yet reached that state where they are a unit as to proper treatment, even when a rather positive diagnosis has been made. It is freely stated without contradiction that most of the diagnoses are made after the abdomen is opened. This happened to me on a number of occasions.

Preventive and palliative measures to ward off disease is becoming daily more important to the profession as the best adjunct to the practice of medicine, hence the care of the girl while at school and before marriage is just as important as is the care of the woman after she has become a mother.

Proper clothing, exercise, fresh air and food, and the intestinal tract and menstrual function need supervision. Prenatal care, good obstetrics with proper after care is essential to the health of mothers. A realization of these facts by the women of our land will redound to their good, and education on our part is the proper channel for its accomplishment. Lack of proper attention to detail and history, and the too ready diagnosis of neurasthenia in undiagnosed

pelvic condition drives thousands of cases away from the profession into the hands of incompetent quacks.

Fothergill states "that at present there is no local or surgical treatment available. Therapy consists mainly of palliative measures, careful personal hygiene, regular exercise, avoidance of constipation and of improper work."

The so-called local treatment in my hands has proved of great benefit, in a few probably diagnosed cases, and has seemed to produce improvement. Support of the uterus—patient assuming the knee chest position three times a day for a period of 20 minutes—local treatment towards the reduction of discharge, associated with a prescribed systematic diet, care of intestinal tract and a building up of the system has given material benefit.

Surgically I am not convinced that we are meeting with success.

Ligating veins and cutting between ligatures (the operation I believe best suited for the majority of cases in which surgery is exercised), removal of veins by excision and hysterectomy have all been tried time and again with reported successes, but recurrence of the pain after these apparent successful operations, is so common, with unfortunately more or less increased pathology that it makes the outlook at present disheartening.

Castano's operation of ligating and severing the utero-ovarian veins above the ilio-ovarian ligament, may be a step in advance.

I have had no experience with this form of operation, but Polak states that in his hands it has not given the relief claimed for it.

Removal of tubes and enlarged ovaries (which microscopically show no disease) for a pelvic varicoiele is a mistake, as relapse is almost sure to follow, and patient may be in a worse condition than before operation. This was emphasized by Tracey in his paper entitled "A Criticism of the Surgical Treatment of Varicocele." Various techniques evolved of shortening utero-sacral pelvic ligaments have been tried, but with questionable success.

My own conclusions are that pelvic varicocele at the present time is best cared for by local treatment, and that surgical measures for its relief should only be done when the pain becomes unbearable.

REFERENCES

Castano, C. A.—Surg. Gynec. & Obst. 1925, vol. 40, p. 237-43.

Cotte, G. and Jezditch—Gynecologie et Obstetrique, 1923, vol. 7, p. 205-15.

Else, J. E.—Northwest Med. 1910, n. s. vol. 2, p. 75-78.

Darnell, W. E.—Jour. Am. Med. Ass. 1914, vol. 63, p. 391-95.

Engelman, F.—Zentralbl. fur Gynak. 1922, vol. 46, p. 1374-75.

Furniss, H. D—Post-Graduate 1907, vol. 22, p. 1168-70.

Furniss, H. D.—Med. Rec. 1914, vol. 86, p. 986.

Furniss, H. D.—Am. J. Obst. 1915, vol. 71, p. 143-45.

Furniss, H. D.—A. Jour. Obst. 1917, vol. 152.

Miller, J. W—Zentralbl. f. Gynak. 1922, vol. 46, p. 1370-73.

Sehler, W. H.—Journal-Lancet 1921, vol. 41, p. 13-16.

Shober, J. B.—Am. J. Obst. 1901, vol. 43, p. 664. Tr. Sect. Gynec. Coll. Phys. Phila. 1901, vol 7, p. 19-25.

Tracy, S. E.—New York Med. Jour. 1909, vol. 90, p. 214.

Polak, J. O.—American Journal of Obstetrics and Gynecology.

Phelan, G. W.—Volume 8, p. 664.

Fothergill, W. E.—British Med. Jour. 1921, p. 925.

Dudley, Palmer—New York Med. Journal, 1888.

Kelsall—American Journal of Surgery, 1921.

Skene Text Book.

Reed's Text Book.

Modern Text Book.

DISCUSSION

DR. WILLIAM S. GARDNER, Baltimore, Md. (opening the discussion at the request of President Bloss):

I was very much interested in this paper of Dr. Tate's; in fact, it is one of the most elaborate papers on this subject that I have ever heard. One of the most important points, I think, is that in the majority of cases the diagnosis is made after the abdomen is opened. In some cases a guess diagnosis is made before then. Personally, I do not think I have ever made a diagnosis of varicose veins of the broad ligament before the abdomen was opened, with any assurance of confirmation. It is a thing in which I have been interested for some years. I used to tie them off, used to do removal, etc., but it finally soaked into my head that most fluids, including water and blood, will run downhill easier than they will run uphill. It is a hard thing for medical students to learn. After I learned that I came to the conclusion that the simplest thing to do was to get the

uterine end of that broad ligament up higher than the pelvic end, and this vein would empty itself. So what I have been doing for a long time is not to bother with the varicose veins at all but do a suspension—draw that broad ligament up tight and sharp. I believe in that way you will get better results than from treating the varicosities. As the essayist said, you have a great many of these varicosities in an uterus in normal position but a little below its level. If you can get the fundus up high enough and keep it there, the varicosity of the broad ligament will give very little trouble.

DR. TATE, closing the discussion:

I knew so little about pelvic varicocele that I hesitated to bring this paper before you; but it is interesting, and I had a few cases which I had diagnosed or thought I had diagnosed. Now, the main thing in a varicosity is to give it some support, just as we do varicose veins in the leg. We do that by bringing the uterus up, or the round ligaments, or the utero-sacral ligaments. The patient is flat on her back. When she gets up and around, she has that pain again. It is very disheartening. I have come to the conclusion that unless the patient suffers a great deal of pain, bearing-down pain, and is unable to walk, it is better for us to put some sort of support in there and leave the patient alone.

HEART AND CHOLELITHIASIS *

By A. A. SUSSMAN, M. D., *and*
J. R. WILKERSON, M. D.
of Baltimore, Md.

THE PRESENCE of cyanosis, dyspnea, praecordial pain and edema of the feet and ankles of three days' duration in a woman of fifty-five, with no other symptoms of importance, would certainly point most strongly to an acute cardiac decompensation. The distribution of the pain, supplemented by an anxiety, almost akin to that of impending dissolution, would have completed a picture, which simulated that of a true Angina Pectoria, save for the presence of a distressing dyspnea. In addition, as Pal of Vienna has pointed out, an attack of Angina Pectoris rarely occurs in the presence of fever, and it was this elevation in temperature, which served to make our case more perplexing.

One month before the patient's entrance into the West Baltimore General Hospital (January 26, 1926), she developed symptoms apparently of a laryngitis, which responded rather poorly to treatment, so that at the time of admission, one noted an extreme aphonia. Numerous moist rales were present bilaterally over the bases, the heart rate was 130 per minute, the sounds distant and difficult to differentiate, but no murmurs present, slight enlargement of heart both to right and left and blood pressure was 140 systolic over 80 diastolic. The laryngeal examination did not confirm the diagnosis of laryngitis. A definite, though slight degree of exopthalmia, a suggestive von Graefe's sign in an extremely hypersensitive and neurotic individual, constituted an additional angle in the case. The past history was negative as regards predisposing cardiac illness. As is so frequently the case, the patient was not aware of her blood pressure readings in the past, so that a diagnosis of hypertensive cardio-vascular disease with left ventricular failure, could not be validly constituted, although there was strong clinical evidence for this impression.

The heart responded remarkably well with cardiatonic therapy. The sharp sticking pain in the praecordium, as well as the sense of oppression in the chest disappeared, but a vague feeling of soreness, which could be traced by direct extension to the epigastrium, still persisted.

* Original article.

Moreover, that the epigastrium was exquisitely tender was noted from the very time of the patient's entrance into the hospital. The patient's reassuring statement that the gall bladder was removed, served to discount but never excluded suspicion of this organ as a great factor in the production of her pain. A troublesome nausea, accompanied by the vomiting of a bile-stained material, continued to add to the patient's general discomfort up to about February 7th, when these symptoms lessened in severity and a definite jaundice developed. The probability that this was a case of cholelithiasis as well as one of myocardial insufficiency was further increased by the arrival of the report of the former surgeon, indicating that the case was one of drainage and not cholecystectomy. One should not be willing to accept the icteroid pigmentation itself as final proof of biliary involvement, for this is a fairly frequent finding in cases of myocardial insufficiency, as emphasized by Fishberg[2].

Much has been said and written concerning the differential diagnosis, of this type of case by various authors including Levine and Tranter[3], Wearn[4], Faulkner, Marble and White[5]. Since the most striking symptoms may be variable in character and distribution, one must decide between Cardiac Dilatation, Angina Pectoris and Cholelithiasis and at times between Gastric or Duodenal Ulcer and Acute Pancreatitis, considering only the head line conditions.

An investigation of statistics of cholelithiasis and more particularly from the standpoint of association with cardiac disease is valuable. The majority of the cases quoted have been studied at autopsy.

In the figures collected by Mitchell[6] from various sources, one notes that from 3 to 10 per cent of all cases regardless of the immediate cause of death presented biliary calculi. (Table 1).

The aforementioned author reports his own observations made in a series of 1,600 autopsies in coroner's cases. These figures have particular value because they involve autopsies in persons of all ages and both sexes and not so largely older subjects, when gall stones are definitely more frequent in occurrence. In his series calculi were demonstrated in 60 cases or 3.1 per cent of the entire number. A geographical variation of findings is at once apparent in comparison of the above figures. In the Nelson System of Medicine, the average incidence in a total of 80,802 autopsies is given as 5.9 per cent.

Peterson[7] reports among 1065 abdominal sections in women for lesions other than gallbladder disease 135 cases of gallstones—a percentage of 12.6. Less than 1 per cent of the cases were under 20, while 75 per cent were observed in persons over 40 years of age.

In a series of 17,402 cases at autopsy in St. Petersburg from 1903 to 1912, Hesse[8] found the greatest number of cases in women in the sixth decade. It is interesting to note that of the group of 378 positive cases, 319 or 84 per cent presented no symptoms—accordingly, a latent cholelithiasis.

A study of age incidence of all sources indicates the largest number in the sixth to seventh decade.

The predominance is in women. Schroeder (quoted by Naunyn[9]) found the proportion as high as five males to one female in different portions of Germany. A comparison of Schroeder's findings with those of Mosher[10] at Johns Hopkins Hospital follows (Table 2):

In Mitchell's series a total of 153 cases presented lesions of the heart. In 58 cases of valvular disease there was an association of cholelithiasis, while in a total of 95 cases of "fatty degeneration and other forms of myocardial disease" only five presented stones. The latter finding does not agree with the observations of the various authors quoted. Their reports indicate the greatest percentage of cases in the sixth to seventh decade. Since it is also true that myocardial changes are extremely frequent in these age groups, one would place the estimate of cases of co-existent cholelithiasis and myocardial disease considerably higher.

Brockbank[11] in a series of 1347 necropsies at Manchester found biliary calculi in 5.4 per cent of the cases without cardiac disease and 10.9 per cent of those with such disease. Rolleston's[12] findings were similar, except that his series indicated a slightly higher

percentage in Aortic than Mitral disease, while the former found the reverse.

CONCLUSIONS

1. Pathological statistics indicate (a) The presence of a high percentage of gall stones in cases of women over fifty, who have died from various causes other than cholelithiasis.

(b) Cholelithiasis is frequently latent over a considerable period of time.

2. The possibility of myocardial degeneration and cholelithiasis being co-existent in the same case is an important consideration to bear in mind.

BIBLIOGRAPHY

1. Pal, J.: Gefasskrisen, Leipzig, 1905.
2. Fishberg, A. M.: J. A. 80:1516 (May 26) 1923.
3. Levine, S. A. and Tranter, C. L.: Am. J. M. Sc. 155:57-66. (Jan.) 1918.
4. Wearn, J. T.: Am. J. M. Sc. 165:250 (Feb.) 1923.
5. Faulkner, J. M., Marble, H. C., White, Paul D.: J. A. M. A. 83:2080 (Dec. 27) 1924.
6. Mitchell, L. J. Annals of Surgery, LXVIII, P. 289, (Aug.) 1918.
7. Peterson, Reuben: Surg., Gynecol. and Obstet. XX, 1915, p. 284.
8. Hesse, E. and Hesse, M.: Beitrage Z. klin. Chir., LXXXIX, p. 611, 1914.
9. Naunyn, B.: A treatise on Cholelithiasis, London (New Sydenham Society), 1896, p. 38.
10. Mosher, C. D.: Johns Hopkins Hosp. Bull., (Aug.) 1901, p. 253.
11. Brockbank, E. M.: Med. Chronicle (Nov.) 1893, p. 84.
12. Rolleston, H. D.: Dis. of Liver, Gall-Bladder and Bile-ducts (2nd. edit.) London, 1912, p. 721.

NECROPSIES

TABLE 1	Total No.	With Biliary Calculi	Per Cent
Erlangen and Munich (Ritter)	19,974	1,652	7.8
Petrograd, Obouchow Hosp. (Hesse)	17,402	378	2.17
Basle (Roth-Courvoisier)	16,025	1,714	10.7
London, Guy's Hosp. (Ticehurst)	11,133	335	3.
Copenhagen (Poulsen)	9,172	347	3.8
Japan (Miyake)	8,406	257	3.05
Kiel (Peters)	5,962	161	2.7
London, St. George's Hosp. (Rolleston)	4,616	268	5.8
Calcutta (Rogers)	4,544	233	5.37
Dresden (Fiedler)	4,300	270	6.3
London, London Hosp. (Walton)	3,755	131	3.48
Sweden (Scheel)	2,753	406	15.
N. Y., Pres. Hosp. (Herter) (gall-bladder)	2,371	179	7.6
Gottingen (Hunerhoff)	1,951	85	4.4
Albany, Bender Laboratory (Stanton)	1,667	120	7.2
Baltimore, Johns Hopkins Hosp. (Mosher)	1,655	115	6.94
Chicago (Mitchell) (gall-bladder)	1,600	50	3.1
Manchester (Brockbank)	1,347	101	7.4
Strasburg (Schoeder)	1,150	141	1.2
Panama (Clark) Negroes	1,088	24	2.2
Tomsk, Pathologic Institute (Hesse)	1,000	31	3.1
Panama (Clark), whites and half-breeds	404	12	3.
Toronto (Ryerson)	333	12	4.

TABLE 2	No. of Autopsies	No. Cases with Gallstones	Percentage of Cases
Schroeder, 41-50	252	28	11.1
Male and Female—			
51-60	161	16	9.9
61 and over	258	65	25.2
Mosher, 41-50	328	29	8.84
Male and Female—			
51-60	258	34	13.14
61 and over	219	28	12.17
Female—			
41-50	115	16	14.0
51-60	88	20	22.7
61 and over	57	8	14 21
Age			

PERINEAL PROSTATECTOMY

Twenty-five years of experience with perineal prostatectomy has convinced Parker Syms, New York (Journal A. M. A., Jan. 23, 1926), that it is the operation of choice rather than suprapubic prostatectomy. In his opinion, the two stage operation should not be resorted to as a routine. It should be reserved for cases in which it is needed; and when it is employed, the bladder drainage should be through the perineum and not through a suprapubic cystotomy. Repeated blood examinations and kidney function tests should be made, and when the patient appears to be at his optimum, if his condition may be considered reasonably satisfactory, one can proceed with the prostatectomy with little anxiety; for median perineal prostatectomy, under sacral anesthesia, entails very little risk. Thoroughly satisfactory anesthesia can be produced in nearly 100 per cent of the cases by the simple injection of a proper solution of procaine into the sacral canal. If found necessary, parasacral injections can be supplemented. Syms makes a median perineal section, with vertical incisions through the prostatic sheath on either side, enucleating first one lobe and then the other. Hugh Young's tractor is used to bring the gland within easy reach and only a small perineal catheter is inserted, with a small loose packing in the prostate sheath. Bladder irrigation is scarcely ever done. The final functional results, as far as the bladder is concerned, Syms says are as good as those following suprapubic prostatectomy, if not better. As to convalescence, there can be no comparison, as to both brevity and comfort. Patients are out of bed within from twenty-four to forty-eight hours after operation; they have bladder control and are able to go about in comfort within a week.

A REVIEW OF A HEALTH SURVEY OF 68 CITIES *

By R. H. EDMONDSON, M. D.
Morgantown, W. Va.

THIS is an account of health work, conducted by public and private agencies, in all the cities of the country with populations from 40,000 to 70,000 according to the 1920 census. The information is based upon the personal study of the cities by five experienced public health men. The survey was made during the first six months of 1924. The report is treated under four sections:

I. "The Conduct of the Investigation," in which the purpose and the methods of study and analysis of information are explained.

II. "The Administrative Practices in Public Health," in which activities are discussed critically under such chapter headings as Organization of Health Departments, Vital Statistics, Communicable Disease Control, Maternity Hygiene, Hygiene of the School Child, Sanitation, Public Health Nursing, The Private Agency, etc.

III. "Sketches of Health Work in Each City," containing a brief account of health work in each of the 86 cities and a description which enables a city to "find itself in the picture." In West Virginia, Wheeling and Huntington were surveyed.

IV. "A Proposed Plan of Community Health Organization for a City of 50,000 Population," which contains constructive suggestions showing how a typical city of this size might direct its energies productively in the field of public health.

The report brings out the fact that the health of the child is dependent upon the provisions which a city makes for its entire public health program. There is evidence that every one of the 86 cities recognize, to some degree at least, the responsibility of the community as a whole for the health of its child population. The extent to which this belief is carried into practice varies widely, however. At one extreme is a city which has but one full-time employee in its health department, as does Morgantown; at the other extreme are several cities with 20 full-time employees.

The daily health habits of 35,000 children in these 86 cities were learned by means of special tests. Again the variation in individual cities is striking.

There is evidence of much need of standardization of health work with the object of doing away with practices that cost out of proportion to their return. One of the most important needs is the full-time health officer with a background of training in health administration and community educational methods. With leaders of this type adequately compensated for their services, it is felt that health work can be made much more effective at no great increase in cost.

The outstanding facts of the survey are these:

1. Each city was found to be carrying on some organized effort for bettering the health of children, although the amount on the average is perhaps not over half of what is to be expected in a reasonable health program.

2. By utilizing the scientific knowledge now on hand it is possible, by better organization, to increase materially the health protection of children at no great increase in cost.

3. The greatest needs are well trained health officers devoting undivided attention to the task, standardization of methods, more thought in explaining health work to the public, and better team work among public and private health agencies.

Morgantown has a part-time health officer, a city nurse, a school nurse, a county nurse, all working independently with no coordination.

* Read before the Monongalia County Medical Society at Morgantown, July 6, 1926.

The average cost of the health departments in these cities is 42 cents per capita. In Morgantown it is 23 cents. In the third of cities spending the most, the average is 63 cents, while in the lower third but 21 cents is expended.

"The smaller city of the United States is beginning to recognize healthy children as a community asset. * * * However, important things are still left undone. It does not equip the official health departments with people who are trained for the work and who are paid enough to give their entire time to the position, nor does it appropriate funds that are adequate for the serious duty of promoting the public health. The bright spot is that most communities realize their shortcomings, and some have already progressed very far in their health advancement efforts." It is further stated that standardization in health work is greatly needed and greater efficiency is possible at no great increase in cost.

Official health work of every city should be under the direction of a person with special education and training in public health administration and in educational methods of health promotion.

The way to ultimate economy in health expenditures lies in employing trained personnel on a full-time basis.

It is accepted by public health experts that the services of a nurse connected with the department of health are invaluable, the nurse being looked upon as the great messenger of health. She goes into the homes to do the follow-up work of the clinics. She also disseminates health facts among parents and children and is on the watch for the first symptoms of contagion among school children. A public health nurse was found in every city. There were 19 departments of health without nurses, but in these instances the nurse was supplied by private organizations.

In the matter of vital statistics it is said that many cities are lax although an intelligent understanding to the numbers of births and the causes of death is as important to the city as the balance sheets of a business concern.

There is much scientific study needed of health administration, particularly as related to the control of the disease. Twenty-eight different procedures were found in use for the release from quarantine of a diphtheria patient. The fumigation of a room with gases following the termination of a case of disease was found practiced in a third of the cities, although this method was abandoned years ago in the larger cities in favor of more modern methods of cleansing.

The report looks favorably on the progressiveness of 40 cities which are using toxin-antitoxin to immunize children against diphtheria. In one city 4,900 children were thus protected during 1923 and 1924.

The reporting of tuberculosis to the health authorities is stated to be inexcusably lax. There were 17 cities where the number of deaths reported actually exceeded the number of cases, although as a matter of fact there are probably five to ten active cases to every death. "The social and economic advantage of treating cases early in childhood, or in the early stages of the disease, is still frequently disregarded," is one of the conclusions of the study.

The following special facilities to combat tuberculosis are recommended for every city: (a) classes for substandard children with special rooms, modified work programs, rest and extra food; (b) summer camps for underweight children and contacts of cases; (c) hospital facilities for incipient cases, child or adult; (d) provision for the assistance of the post-sanatorium case who still must lead a protected life but who can under such conditions be self-supporting.

In the protection of mothers, 40 cities have established pre-natal clinics under the guidance of physicians and five other cities have mothers' conferences with nursing supervision. The importance of this educational work and professional care is indicated by the fact that approximately ten mothers die annually from causes due to childbirth in the average city of 50,000 population.

The infant is said to be the best looked after of any age group in the community. Infant welfare clinics were found in 80 of the 86 cities. On the other hand the preschool child is the most neglected of any age group. The report emphasizes the import-

ance of health care for children in the years before entering school.

Physical examinations of school children are quite universal, but this work is greatly in need of improvement and standardization. The schools in 65 cities are reported to have added courses in health along with the three R's. The common drinking cup, which was a constant danger in spreading disease, is reported to have virtually disappeared from the public schools. It was discovered in only 13 out of 900 schools visited.

Eighteen cities admitted having had epidemics of communicable disease traced to the milk supply in the last five years. Adequate pasteurization of milk is looked upon as the proper safeguards, but only eight cities protected their entire milk supply in this manner, although 12 other cities had more than 90 per cent of their supply pasteurized. Sixty per cent of Morgantown's supply is pasteurized.

The survey stresses the need for more practical methods of educating the public in health. "The layman's conception of the present day job of the health department is that of nuisance inspection and garbage collection," which is quite erroneous. It is recommended that the inspection of nuisances such as noise, unsightly litter, rubbish, ashes, untidy yards and cellars, vacant lots and dumps, which it is said have little, if any, effect upon the public health, should be delegated to the proper city department—fire, police or street cleaning.

With this preamble as a starting point let us now consider Active Control of Communicable Diseases. The medical profession has within its grasp the knowledge of prevention of most of the communicable diseases. But are we, individually or collectively, using our knowledge to this end? Is it not a discouraging commentary on the intelligence and initiative of doctors and laymen that the disease which medical science can most easily prevent, and for which a curative has been available for 35 years, should lead the list of the five common communicable diseases in its death taking? The average mortality rate in 70 cities of the United States for diphtheria was 14.6 per 100,000 population; typhoid fever was only half as costly to these cities, with a rate of 7.4; whooping cough, 5.9; measles, 4.0, and scarlet fever, 3.6, which are encouragingly low, but if we, as guardians of the public's health were alert, could we not "sell" our knowledge, "put it over" in a way convincing to our clientele and materially reduce these figures? The query raises the question, Why? Is it lack of faith in proven theory and practice? Is it timidity? Is it indifference? Or is it an attitude of "let George do it; it is not my responsibility?" I, as city health officer, have endeavored to interest the superintendent of schools in preventive measures, but have received no encouragement.

The board of education of Morgantown has an item of $7,200 for "recreation" in its budget for the coming year because the public demanded it, but not a penny for preventive work. Are we of so little influence that we fail to impress preventive measures for the child upon the powers that be?

Variety of Procedure in 86 Cities

Owing to the surprising variety of methods and procedures, of regulations required and practices followed in various communities, one studying the question becomes confused as to the best method to follow. In one city the release from isolation of diphtheria is 10 days with one negative culture; in another three weeks or until released by a doctor; while in a third, three weeks and two negative cultures on successive days. For scarlet fever it varies from three weeks to six weeks, or on the physician's permission. Instruction of the families is given in cases of measles in 70 cities; in whooping cough, in 60 cities; in typhoid, in 76 cities. Child contacts are permitted to return to school after exposure to diphtheria cases under no less than 29 different conditions, with such variations as: one negative culture, three days, 21 days, one week after the quarantine is removed, or on the judgment of the attending physician. Indeed the main deduction to be drawn from the study of the procedures followed in the 86 cities for the control of the more common communicable diseases is that there is no uniformity whatsoever and that the practices are based chiefly upon tradition and individual preference. Even the provisional recommendations of

the committee on communicable disease control of the American Public Health Association are largely unheeded.

It is regrettable that during the many years of organized health department supervision over communicable diseases, so little scientific study has been given to the question of the effectiveness of various methods of administrative control of such diseases as measles, whooping cough, scarlet fever, and even diphtheria, that the value of such procedures as placarding, instruction, isolation, hospitalization, supervision of contacts, either as ideally conceived or as actually employed is not known today. There is no assurance that the reductions in the mortality rates, such as they are, are due to the wide variety of methods imposed with a minimum of supervision upon an often antagonistic household.

Since there is so little guarantee that any of the common administrative measures for control of the patient and his contacts, other than specific immunization, are really responsible for reducing the incidence of these common respiratory communicable diseases, there can be no great value in attempting to draw any conclusion from the varied practices in these cities. The growing knowledge of the etiology of measles and scarlet fever, with the accompanying development of protective sera, should produce far-reaching results both in the prevention and in the treatment of these diseases, which may be comparable to the results obtained since 1894 in the treatment of diphtheria with antitoxin and more recently in the prevention of the disease with toxin anti-toxin.

Reporting of Cases

It is perfectly evident, however, that the basis of any activity directed against communicable disease rests upon prompt knowledge of the existence of every case of the disease. How complete and prompt these reports are will vary according to the educational efforts, backed at times by legal pressure, on the part of the health officer.

Tuberculosis Control

Tuberculosis is the most serious of the communicable diseases. It infects the great majority of the people. It kills a larger number than any other disease, with the exception only of pneumonia and of organic diseases of the heart. Its economic cost to the individual, the family, and the community is appalling. Twenty years of struggle have done much to educate the public regarding the prevention and cure of tuberculosis. The organized fight against tuberculosis is a movement of such magnitude that, together with many other factors, it must be held in considerable measure responsible for the great reduction in tuberculosis during this period. In spite of the large amount of individual information which is current in the country at the present time, it is distressing to realize that the importance of tuberculosis as a community problem requiring the best efforts of the health department is still very inadequately realized. The report of municipal health department practice of the American public health association showed that in 1920, of the 83 cities with populations over 100,000, only 46 possessed municipal health department tuberculosis clinics, and only 29 cities had appropriated money specifically for tuberculosis.

Venereal Disease Control

This problem in public health administration is so complicated and so interwoven with social and moral questions that an introductory statement seems advisable in explanation of the basis chosen for the study and for the use of the appraisal form in the field. It was recognized that the limitations of the study precluded any comprehensive study of venereal disease control measures, but it was considered that the recording of a few important data for each of the cities might serve as a basis for comparison and as a stimulus to the subsequent assembling of additional information which would confirm this basis or explain wherein it was erroneous.

The clinic was finally selected as the most constant factor in the cities to be studied. Furthermore it was possible to use certain figures from general clinic experience as a norm, so to speak, for the population of each city. Reporting of the venereal diseases is as yet too irregular or incomplete for purposes of comparison in reporting this study,

but shows encouraging progress when the difficulties of the problem are considered. Eventually the proper reporting of cases will be worked out with adequate protection of patients, and this item has been included in the three proposed for the appraisal form. Similarly reports on laboratory diagnostic aid in these cities could not be used for purposes of the study, but show evidence of real progress in building up a program for combatting these diseases.

The private physician is assured to be the largest potential factor in the early diagnosis, treatment and follow-up of venereal disease cases, but no way could be devised to collect data from this group in the time available. It is expected that the tactful, persistent promotion of notification of these diseases will open the way to this source of information. Health officials are also giving careful study to ways and means of securing and properly utilizing, for the welfare of individuals and of the community, information from the nursing groups, social service workers, industrial groups, life insurance companies and other agencies. Most encouraging progress has been made in this direction in relation to ophthalmia neonatorum, and in lesser degree along other lines of protecting children from infections.

Measles

Chapin, in his most excellent work, "The Sources and Modes of Infection," says:

Measles is a disease which in cities it seems to be impossible to check to any appreciable extent by isolation. In Aberdeen this was faithfully tried for 20 years, 1883 to 1902, but no apparent effect was produced on the prevalence of the disease. Similar failures have been noted elsewhere. * * * In New York measles was first isolated in 1896, but not until 1902 were the regulations very rigorously enforced. The average death rate from 1895 to 1904 was 2.40 and the highest death rate since 1896 was reached in 1906, when it was 2.69. There is no evidence that the measures adopted in New York have had any more influence on the prevalence of the disease than did isolation and disinfection in Aberdeen. It seems in the highest degree probable that the disease prevails because of the unrecognized but infectious prodromal stage. No amount of isolation after the disease is recognized can atone for the harm done before the diagnosis is made."

And to quote Vaughn of the University of Michigan:

"We are sure that under present conditions, usually prevalent throughout the country, measles is not recognized in its earliest stages and that so far as the protection of others is concerned isolation under existing conditions has been futile and will continue to be so. We have stated elsewhere that not a troop train reached Camp Wheeler in the fall of 1917 that did not have on board from one to six cases of well developed measles. It was absolutely futile to isolate the men on reaching camp and expect to prevent those who accompanied these cases on the train from coming down with the disease.

"Statistics from practically every part of the world show us that the mortality in measles from the sixth month of life to the fourth or fifth year is high. After the last mentioned age has been reached measles even with its complications, except under certain conditions, is not so highly fatal. We should, therefore, make every effort to protect children under six years of age from the disease. In doing so, as Brownlee has already pointed out, we must consider not only the child that is coming down with the disease, but especially those to whom this child is likely to carry the infection. We think it probable that if children who have reached six or seven years of age could be intentionally exposed to this infection at a time when the conditions are most favorable for their care, the death rate from measles would be greatly diminished. However, should this be put into practice, a certain percentage of those exposed would have complications and die; therefore, we refrain from making any such recommendation. In attempting to control measles we should bear in mind that it is the older child, as a rule, who carries the infection into the home and that the danger to the younger members of the family is greater proportionately than it is the one who brings it into the household.

"In camps, especially those filled with susceptibles, we are inclined to the opinion that even under conditions of the past, isolation

has possibly retarded the spread of measles and to this extent has been beneficial. As we have attempted to show, nothing done at Camp Wheeler lessened by one man the cases of measles in that division, but the isolation practiced retarded its advances, and to the extent that it did this such a measure was worth while.

In considering the position of a full time health officer let aspirants realize that in the past we have been noticeably unbusinesslike. If you do not think so look at the "Help Wanted" advertisements in a recent trade magazine.

"Live town requires the services of the following:

City electrician	$5,000
School janitor	3,000
Matron for prison	4,000
Full-time health officer (must be a graduate of Class A medical school)	1,800

"Here is still another one:

United States Civil Service Examinations:

Stenographers	$4,000
Musicians	4,000
Postal clerks	3,000
Electricians	3,000
Printers	3,000
Physicians	900

Evidently some of us are cheap and degrade other practitioners. You can see what happens because of our lack of keen business sense. The janitor or stenographer is worth more than the physician. The thought of it is a nightmare; it is even funny—it is so funny that it is tragic. Rip Van Winkle had a long, long sleep, but he eventually woke up. We have outdistanced Rip—we are still asleep!"

Physicians are not mercenary, but are professional laborers worthy of their hire.

BIBLIOGRAPHY

American Child Health Association: "A Health Survey of 86 Cities."
Vaughn: "Epidemiology and Public Health."
Chapin: "Sources and Modes of Infection."

LEFT LATERAL INCOMPLETE DISLOCATION OF THE AXIS, WITH REPORT OF A CASE *

By DR. C. A. LATHAM
Huntington, W. Va.

NOTHING original is claimed as the motive of this paper, but rather a review of some of the important points in connection with a disturbance of the normal relation of the atlas and axis.

F. V., a young, white, schoolgirl, aged 8 years, complained of pain and limited mobility of the neck. The disability began January 6, 1925, at 11:00 a. m., when patient was playing at school, and another girl ran against her, knocking her down. She was knocked backward, falling with the body in the erect position, and landing on her buttocks. Although dazed, she regained her feet without assistance, but had to lean against the building, and did not continue her play. Patient complained of no pain at this time, but found her neck was stiff. She returned to the schoolroom, when shortly afterward she noticed pain in her neck, sharp in character, and made worse by slight rotation of her head. Apparently, the pain was localized at one point in the right side of her neck. She could turn her head slightly to the right, but none to the left. She noticed that the left hand and arm tingled and pained her. She complained of her neck until the teacher sent her home. The mother promptly called for medical attention.

The physical examination revealed a healthy looking girl, holding her head with both hands, and evidently suffering severe pain with each movement of the head. The head was leaning toward the left side, with the face rotated somewhat to the right, and the chin slightly elevated. The left sternocleidomastoid muscle and posterior cervical muscle were soft and relaxed. The right

* An original article.

sternocleidomastoid muscle and posterior cervical muscle were tense. The patient rotated her head slightly to the right, but none to the left, and complained of severe pain when an attempt was made to turn face to the left. Patient was comfortable as long as head could be held in the fixed position. Apparently, there was no bulging of the posterior pharyngeal wall. Sensory impulses were diminished on the left arm. The right arm appeared to be hyperaesthetic. Reflexes were sluggish on the left arm. The right arm appeared to be normal. A tentative diagnosis of fracture dislocation of the second or third cervical vertebrae was made, and the patient referred to Dr. A. R. McKenzie, for X-ray.

Dr. McKenzie's report is as follows:

"The roentgenogram reveals the head flexed with chin turned to left, so that the cervical vertebrae are curved with the convexity to the right. The atlas appears to be slightly rotated anteriorly, while the axis and the lower cervical vertebrae, as a whole, appears to be slightly displaced to the left, and rotated posteriorly.

"Diagnosis: Left lateral incomplete dislocation of axis."

This diagnosis was confirmed by Dr. Max Kahn, of Baltimore.

The patient was given a general anaesthetic with chloroform, then thoroughly relaxed, extension was made by pulling gently on the head, with counter pressure exerted against the shoulders. The head was now rotated from side to side, and found to rotate freely. The patient was put to bed, with the head of bed elevated, and counter pressure from the head by means of adhesive cord, weight and pulley, and sand bags to each side of the head, to prevent rotation. The sandbags were removed when patient reacted. After reacting from the anaesthetic, patient had no pain, and could rotate her head. Patient has had no pain since, and function is normal.

In this particular case, there was a disturbance of the normal relation of the atlas and axis. The atlas in relation to the axis was slightly displaced to the right, and rotated anteriorly. The axis in relation to the atlas was slightly displaced to the left, and rotated posteriorly.

In a report of thirty cases of dislocation of the atlas and axis, Jacobs concludes that many cases of suddenly acquired rigid neck associated with abnormal position of the head, which cannot be voluntarily corrected are probably luxations involving of the relation of the atlas to the axis.

Conner, in a review of the reported cases of fatal and non-fatal injuries to the atlas and axis, concludes that the most important point to determine, as well as often the most difficult, is the fracture or integrity of the odontoid process. In seventy-five percent of the fatal cases, the odontoid process was fractured. Conner also calls attention to the absence of paralytic symptoms in dislocation and the intermittent paralysis following odontoid fractures which are not immediately fatal.

In simple incomplete luxation, extension by weight and pulley will relieve pain, overcome muscular rigidity, and in most cases overcome the luxation. Reduction under anaesthesia is not without danger; however, manipulation without anaesthesia is valueless.

The most common type of luxation is an anterior displacement of the atlas. This is frequently associated with fracture of the odontoid process. If pressure symptoms are present, or reposition of the vertebrae is not accomplished by other methods, operation is advisable.

REFERENCES

Walton, M. & S. J., 1913: "Cervical Dislocation and their Reduction."

Connor, Ann. Surg., 1907: "Rotary Dislocations of Axis."

PSORIASIS *

By L. G. BEINHAUER, M. D.
Pittsburgh, Pa.

THERE is no disease of the skin that gives the physician more concern than psoriasis which ranks second to eczema as a common skin affection. Although this disease has been studied by many observers, nothing new has been given us and its cause and its cure still are "unknown" in medicine. To most of us the patient with psoriasis is a most pathetic picture ever trying some remedy which will permanently alleviate all his symptoms with the end result that he sooner or later loses faith in medicine because his wish has not been gratified. In discussing this disease with the patient I believe it is imperative that the physician impart the true prognosis. The patient should be given a quiet, straightforward explanation of his conditon and made to understand that we can offer no "cure" for this disease and its cause is still unknown. Again it should be explained that palliative measures can be successfully instituted to relieve temporarily the patient of his cosmetic disfigurement and subjective symptoms. The purpose of the "explanation of psoriasis" to the patent is two-fold because the patient can early reconcile himself to his fate and he, then, can become amenable to the treatment outlined.

Every patient afflicted with psoriasis should receive a complete physical and medical examination in order to detect any pathologic defects. Especial attention should be paid to focal infections, constipation and glandular disturbances and corrections for these ailments should be made as soon as possible. The personal hygiene of the patient should be strict and mental worry and care should be eliminated where possible. Moderate exercise in the open air is advocated.

The diet of the patient should be nutritious, wholesome and easily digested. I believe diet plays a minor role in the production of this disease although many observers disagree with this statement and still insist upon a meat or purin free diet or other modified diets. Alcohol, tea and coffee are irritants and should be avoided. There is no specific internal medication for psoriasis. According to Sutton and others, arsenic stands first as the drug of choice used in combating this disease. Fowler's solution given in ascending doses to the point of tolerance is the favorite drug although sodium arsenate, Asiatic pills and sodium cacodylate have their advocates. Arsphenamine and neoarsphenamine are useless. When giving arsenic one must closely check the urine for any kidney irritation. Salicin, as a powder, is strongly advocated by Crocker. Glandular products have received much attention. Thymus extract has been given intramuscularly with doubtful effects. Thyroid extract and iodides have been used with indifferent results and one must be cautioned in using them. Recently non-specific protein therapy; such as, intravenous injection of typhoid bacilli, autohemotherapy and horse serum have been added to the list but nothing definite has resulted from their use. Sodium salicylate intravenously has gained popular favor recently but conflicting reports have been given to us from its use.

The purpose of local medicine in dermatology are to protect the parts, rid the skin of the waste products of its disease and reverse the pathology. In psoriasis this is absolutely essential and imperative. This I believe is the one disease of the skin where frequent bathing is necessary.

Drugs having a keratolytic action are advised in psoriasis and of these, chrysarobin, acid salicylic, neorobin, pyrogallol, betanaphthol, the tars and ammoniated mercury are the best. Chrysarobin is the most effective and yet most dangerous because of its complications — dermatitis and conjunctivitis.

* An original article.

It can be used in a 1-10% ointment twice daily being rubbed into the affected areas, or in collodion as a painting or in a chloroform mixture. Never use chrysarobin on the face or scalp. It has a tendency to stain clothing and this is objectionable. It can be best used if the patient submits himself to treatment where it can be carried out under a watchful eye. The combination of chrysarobin and autohemotherapy gives excellent therapeutic results. Neorobin (1-4—1-2%) is less powerful and less irritating but can be used more safely than chrysarobin, and unlike chrysarobin can be used with other drugs. Pyrogallol and betanaphthol (1-5%) are less commonly used. Ammoniated mercury (3-20%), tar (3-20%) and acid salicylic (3-15%) alone or in combination are very effective in psoriasis. It is well to begin with a small percentage of a given drug, as ammoniated mercury, and gradually increase its strength adding the tars or acid salicylic as the occasion demands. A generalized eruption often times requires from three to nine weeks to clear under this type of medication but it is a safe procedure.

In recent years the roentgen-rays have been used in the treatment of psoriasis. The roentgen-rays are the cleanest, most efficient, quickest but most dangerous form of treatment for psoriasis. The applications should be given by one who has been trained in their use. Unfiltered rays are used in fractional doses of one-eighth to one-half skin units at 5-7 days intervals. Generalized psoriasis should not be treated at one sitting but different areas may be treated daily. Localized psoriasis can be best treated in this manner. One must remember the dangers of overexposures or too frequent exposures and should any irritation appear, further exposures should be stopped. The unaffected skin should be protected at all times from these exposures. The ultra violet ray also has been offered and its use is more selective. It must be used in exposures producing an erythema of the skin followed by a complete desquamation. This method together with the use of tar offers an excellent means of combating certain cases of psoriasis. Mention might be made of deep roentgen-ray radiation over the thymus gland but the results are not encouraging.

The successful treatment of psoriasis involves many factors of which experience is foremost. The physician who constantly treats this disease becomes skillful in the use of the drugs mentioned and naturally has the advantage. It is wise to use low percentages of these drugs and increase their strength to skin tolerance. Quick results are not to be expected and a slow steady progress in alleviating the lesions is preferred. Drastic treatment is advised against and roentgen-rays should be the last resort and then given only by skilled hands. Since we are dealing with an unknown we should always bear in mind our aim is a relief of subjective symptoms and of cosmetic disfigurements in the easiest and safest manner, remembering at all times the general welfare of the patient.

PARINAUD'S CONJUNCTIVITIS, WITH REPORT OF A CASE *

By M. L. DILLON, M. D.
Charleston, W. Va.

PARINAUD'S conjunctivitis was first accurately described by Henri Parinaud, celebrated French ophthalmologist, in 1889, and in recent years has been the subject of extended research in this country by Sanford R. Gifford, of Omaha, Drs. F. H. Verhoeff and G. S. Derby of Boston. According to these American authors the disease occurs only in the temperate zone and more frequently in winter than at other seasons. The sexes are about equally affected and all ages are liable to the disease.

* Read in the Eye, Ear, Nose and Throat Section, fifty-ninth annual meeting, West Virginia State Medical Association at Morgantown, May 26, 1926.

The condition is usually unilateral. In only a few cases reported have both eyes been affected. The condition is ushered in by systemic disturbances, general malaise, and slight fever and concurrent therewith or shortly following, the conjunctival lesions develop. The chief symptoms are swelling of the lid, the upper lid being usually most marked, hyperemia of the bulbar conjunctiva and a moderate mucoid discharge. The characteristic conjunctival lesions consist of red or yellow polypoid vegetations, small yellowish granules, erosions and superficial ulcers, glandular involvement usually takes place with or very soon after the development of the ocular disease, most often the preauricular glands are involved, more rarely the retro-maxillary, the parotid, the submaxillary, and the cervical. The disease, according to different authors, may last from one month to two years.

Etiology

The different investigators are not in agreement as to the causative agent of this disease. Parinaud believed the disease of animal origin. Verhoeff, of Boston, has studied 18 cases with the following deductions:

Nationality—All natives of the United States—there were no Hebrews.

Locality—All lived within 30 miles of Boston.

Occupation of patients or their fathers—Laborers 3, carpenters 2, boiler makers 1, mechanics 2, grocer 1, stenographers 2, factory hands 1, electrician 1, painters 1, not recorded 4.

November to January inclusive, 13 cases; February to October, inclusive, 5 cases.

Trauma—Four cases gave history of trauma.

Animal contact—One patient took care of a horse, one a pig, one child played with a guinea pig. In no case was there contact with animal known to be diseased.

Age—Three youngest patients 3, 6 and 7 years; oldest, 35—average age 18 years.

Sex—Males 14, females 4.

Eye affected—Right eye 9, left eye 9, both eyes, none.

Bacteriology

Leptothrices in large numbers were found in all cases except one. Wherry and Ray have reported the cultivation of a leptothrix from the preauricular gland in a case of Parinaud's conjunctivitis. They state that it seems probable, though not certain, that the organism they grew is identical with that found in sections by Verhoeff. Collins and Mayon in their recent work on bacteriology and pathology of the eye have nothing to say as to the bacteriology of this condition other than that staphlococci are often found. Histologically, they have the following to say: The epithelium shows the usual changes found in subacute inflammation. The subepithilial tissue is densely infiltrated with lymphatic exudation which in the early stages contain comparatively few plasma cells, as these cells undergo necrotic changes, fragments of them are found free in the tissue and within the phagocytic endothelial cells.

Differential Diagnosis

There seems but three conditions with which Parinaud's conjunctivitis might be confounded—conjunctival tuberculosis, trachoma and squirrel plague conjunctivitis (tulerensis). The acute onset, the synchronous involvement of adjacent glands, the absence of what would be clinically a characteristic tubercle, and the fact that Parinaud's condition tends to resolution whereas tubercular conjunctivitis does not tend to resolution, plus the irregular ulcerated tubercular areas, would seem sufficient to differentiate the two conditions.

From Trachoma — the almost universal failure to involve the cornea with the other marked differences in the conjunctival lesions and glandular involvement.

From Squirrel Plague—the location and character of the lesion should take the differentiation easy, since in squirrel plague the lesions are mostly on the palpebral conjunctiva and are discrete, deep, round, yellow necrotic ulcers that penetrate to the tarsus. Vail says that the contrast between the deep

red color of the conjunctiva and the brilliant yellow color of the ulcers is as striking as a turkey red, calico dress with yellow polka dots.

Diagnosis

The symptoms and clinical findings as described, namely: Unilateral involvement, absence of corneal lesion, synchronous involvement of adjacent glands with the points of differentiation described under differential diagnosis, it seems to me should make the diagnosis comparatively easy, even without bacteriological or pathological findings.

Case—Miss A, age 16 years, school girl.

Family history—Essentially negative.

General health—Always good.

Appearance—Healthy.

Ten days previous to first seeing patient, there was complaint of slight discomfort with right eye, lids swollen and slight discharge—one week later noticed painful swelling, in front of right ear—general malaise and thought she had some fever. When first seen both lids of right eye were very much swollen, vision normal, no involvement of the cornea, iris or media. On eversion of upper lid and exposure of fornix showed the latter red oedematous and three or four elongated granulations arranged in irregular and rough formation. One particularly large one extended toward the external canthus from the junction of the middle and inner thirds of the fornix with smaller granulations above and below, overlapping the inner end of large granulations.

The granulations appear subconjunctival and sufficiently large to give the conjunctiva at their apices a thinned out or attenuated, pale or translucent appearance. In the sulci near the ends of the granulations, are small conjunctival abrasions with a grayish covering. This grayish exudate when scraped away gives the impression of slight ulceration. On the tarsal conjunctiva of both lids, more on upper than lower, were 4 to 6 irregularly circular and ovoid, grayish opaque areas, undisturbed, slightly raised above the conjunctival surface. These vary in size from two to four m.m. in diameter. There was a slight mucopurulent discharge, and the preauricular and submaxillary glands on same side were enlarged, tense and tender on pressure. There was slight redness over the preauricular swelling.

Smears and cultures from the secretion showed only staphylococci. Due to my lack of knowledge of the conditions, proper bacteriological and pathological examinations were not made. This patient was treated daily for ten days with topical applications of 2 per cent silver nitrate, sol-silvol 20 per cent, every four hours, petrolatum album at bedtime to prevent agglutination of lids. Afterwards patient was seen at intervals of from a few days to a week for a period of three months. Complete recovery resulted, no scarring, nor impairment of vision.

Conclusions

From what information I have gained from literature I have seen, and the clear-cut clinical picture of this case, I am of the opinion that the condition is a definite entity, with a definite causative factor and I see no reason, after reading Dr. Verhoeff's very excellent reprint on the subject, of questioning his claim for the leptothrix as the etiological factor.

I regret very much my inability to give more detailed data on the bacteriology and pathology of this case. This, I freely admit, was due to my lack of knowledge on the subject at the time when these findings would have been possible.

REFERENCES

American Encyc. of Opthalmology.

Descheweinitz' Diseases of the Eye.

Reprint from American Journal of Opthalmology by Drs. F. H. Verhoeff and G. S. Derby, October 1918.

Reprint from American Journal of Orpthalmology, January, 1925, Vol. 8, No. 6.

Dr. Sanford R. Gifford.

THE WEST VIRGINIA MEDICAL JOURNAL

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS

J. HOWARD ANDERSON, Marytown — WALTER E. VEST, Huntington — CHARLES W. WADDELL, Fairmont — HARRY M. HALL, Wheeling

THE JOURNAL issued on the first of each month. Entered as second-class matter, January 1, 1926. Acceptants for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Authorized July 24, 1919.

Subscription to Members	$2.00 Per Year
Subscription to Non-Members	$3.50 Per Year
Single Copies	50 Cents

OFFICERS

President:
J. R. BLOSS ... Huntington
President-elect:
CHESTER R. OGDEN ... Clarksburg
First Vice-President:
R. O. ROGERS ... Bluefield
Second Vice-President:
H. C. SKAGGS ... Montgomery
Third Vice-President:
D. A. MACGREGOR ... Wheeling
Treasurer:
HUGH G. NICHOLSON ... Charleston
Executive Secretary:
MR. STERRETT O. NEALE ... Charleston
Delegate to A. M. A., 1926:
J. R. BLOSS ... Huntington
C. R. OGDEN, *Alternate* ... Clarksburg
Delegate to A. M. A., 1926-27:
H. P. LINSZ ... Wheeling
R. A. ASHWORTH, *Alternate* ... Moundsville

COUNCILORS

First District:
H. P. LINSZ, (1-year term) ... Wheeling
C. G. MORGAN, (2-year term) ... Moundsville
Second District:
C. H. MAXWELL, (1-year term) ... Morgantown
C. H. HALL, (2-year term) ... Elkins
Third District:
JOHN FOLK, (1-year term) ... Bridgeport
C. R. OGDEN, (2-year term) ... Clarksburg
Fourth District:
J. E. RADER, (1-year term) ... Huntington
W. E. VEST, (2-year term) ... Huntington
Fifth District:
J. H. ANDERSON, (1-year term) ... Marytown
H. G. STEELE, (2-year term) ... Bluefield
Sixth District:
R. H. DUNN, (1-year term) ... South Charleston
C. A. RAY, (2-year term) ... Charleston

¶ All original articles for THE JOURNAL must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

¶ Our readers are requested to send marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

¶ It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

¶ Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

¶ Advertising forms will go to press not later than the tenth of each month. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

¶ Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, 303 Professional Building, Charleston, W. Va.

STANDING COMMITTEES

Medical Defense Committee

H. P. Linsz, Wheeling; C. R. Ogden, Clarksburg; C. G. Morgan, Moundsville.

Committee on Scientific Work

G. H. Barksdale, Charleston; O. D. Barker, Parkersburg; D. A. MacGregor, Wheeling, Scientific Secretary.

Public Policy and Legislative Committee

C. A. Ray, Charleston; G. A. MacQueen, Charleston; R. H. Walker, Charleston; James McClung, Richwood; J. R. Bloss, Huntington; D. A. MacGregor, Wheeling.

Committee on Hospitals

Robert J. Reed, Wheeling; B. H. Swint, Charleston; R. J. Wilkinson, Huntington.

Committee on Professional Relations

J. R. Shultz, Charleston, chairman, (3-year term); H. G. Nicholson, Charleston, (1-year term); H. R. Johnson, Fairmont, (2-year term); A. G. Rutherford, Welch, (4-year term); W. R. Goff, Parkersburg, (5-year term).

Surgical Section

E. Bennette Henson, Charleston, chairman; W. R. Goff, Parkersburg, secretary.

Eye, Ear, Nose and Throat Section

T. W. Moore, Huntington, chairman; R. A. Tomassene, Wheeling, secretary.

Woman's Auxiliary Officers

President, Mrs. A. G. Rutherford, Welch; *First Vice President*, Mrs. W. H. St. Clair, Bluefield; *Second Vice President*, Mrs. J. P. Lilly, Morgantown; *Secretary*, Mrs. C. M. Scott, Bluefield; *Treasurer*, Mrs. C. A. Ray, Charleston.

EDITORIAL

YOUR PUBLIC POLICY

The public policy and legislative committee of the state association met in Charleston October 10. To enable all of the members to gain some insight into the activities of this committee, the minutes of the meeting are published in the general news section. It is important that members acquaint themselves with the problems that are before the committee and give it the benefit of their counsel and support.

As this is written there comes to mind one bill introduced by Dr. Harriet B. Jones, a former member of this association, and passed by the last legislature. It is known as "An act to provide for the instruction, examination, licensing and registration of midwives." It had the support of the state department of health but now it is known that Dr. Henshaw, state health commissioner, is thoroughly disgusted with its operation.

The mid-wife bill was a mistake in the beginning. Some opposition was voiced against it but in the hubbub of the chiropractic fight it likely did not receive the attention it justly deserved as a matter of protecting the lives of expectant mothers. Some thought it would be a good thing, that it would raise the mid-wife standards to the benefit of all.

Also, it was thought that it would put competent mid-wives in charge of obstetrical cases in isolated regions. What has been the result? The morning press, on the day the committee met in Charleston, carried a news item relating that twenty-seven mid-wives had been licensed in Kanawha county and of the number, eleven are in the city of Charleston proper. All are in an area, with one or two exceptions, that may be reached by a doctor within one hour. Roads are good in Kanawha county. If it is an outlying district there are still those practitioners who know how to ride horseback.

What is true in Kanawha county is believed to be true in other districts. Instead of carrying with it an elevation of educational standards, the law simply provides that any woman (or man, for that matter) who is 21 years old, is able to read and write, is clean and constantly shows evidence, in general appearance and in their homes, of habits of cleanliness; who possesses a diploma from a school for midwives or who has attended under the instruction of a duly-licensed and registered physician, not less than five mothers and new-born infants during lying-in periods of at least ten days shall be granted a license by the state of West Virginia to perform one of the most serious of surgical operations where not one but two (and maybe, three) lives are at stake.

Even with those above qualifications there is nothing to prevent any person from practicing mid-wifery if she desires. There is no penalty clause attached to the act. In its lead to the story on the list of midwives licensed the *Charleston Gazette* says, "Midwives are permitted to practice only in normal cases and in all other cases physicians must be called." It is wondered who is to decide whether it is a normal or abnormal labor case.

There is no doubt but that the mid-wife has a place in the scheme of things. She has been with us for centuries; she likely will be with us for other centuries, in fact as long as humanity exists upon the face of the world. There is no quarrel with the conscientious midwife. She should be protected because she knows her limitations. There is room, however, for improvement in the state law that permits anyone 21 years old and who has assisted at five births and who is able to read and write, from posting her license as a "mid-wife" and setting up in business as such. The law should be either strengthened or repealed.

The writer apologizes for going to such length on this one particular piece of legislation. Almost all of the matters under consideration by the public policy committee warrant equally as much attention, if not more. This mid-wife law just struck us as

a glaring example of lack of foresight in the matter of legislation affecting the health and welfare of our public.

Read the minutes carefully and do not hesitate to give the committee the benefit of your views on the several matters considered. If you have any other thing that you think the committee should go into, direct a letter giving the details to Dr. Ireland, the chairman, or your executive secretary.

The cooperation of every member is needed —and expected. —C. A. R.

POST-GRADUATE ASSEMBLY

We had the pleasure and good fortune to attend the five days' session of the Interstate Post Graduate Assembly of North America at Cleveland, October 18-22. About 4,000 physicians from the several states and Canada were in attendance and West Virginia was well represented. The program covered the fields of medicine and surgery in all their phases. Lectures by prominent physicians of the United States and many foreign countries emphasized ideas that are old and proven and advocated others that are new and under investigation.

Among the foreign countries represented were England, Scotland, Germany, Italy, France, Sweden, Argentine and Brazil. From what we gathered from the visitors we were impressed with the idea that while some diseases are indigenous to certain nations, many are the same the world over. The use of X-ray findings in diagnosis was greatly emphasized as proving physical findings.

Another impression was the idea that the truth today with our present knowledge may be false and absurd tomorrow with some new discovery in the science of progressive medicine. Thus, if the Newer Physiology of the Gastro-Intestinal Tract, by Dr. Ivy of Chicago, is proven to be true we all will be learning a new process of digestion and scrap the old to which we have clung these many years.

We think this the best meeting of its kind we have ever attended and suggest that every physician who can should attend next year at Kansas City.—C. A. R.

HEALTH AND EDUCATION

While there is some discrepancy in the figures, yet it seems that the Bureau of Education of the Department of Commerce and the New York Times are agreed that the cost of ill-health is much more than a billion dollars annually. No estimate, however, is given as to the initial cost of dying which is known to reach an enormous figure.

Suffice it to say that the average income per doctor in the United States is $1,500—and the profession has been accused of charging exorbitant fees!

A recent news dispatch from Washington had the following to say:

> An average of about $10 annually is spent by each of the 115,000,000 people of the United States, it is estimated, for drugs and medical and surgical attention, exclusive of dental work, according to the Bureau of Education, Department of the Interior.
>
> "To prevent this calamitous waste," says a statement of the bureau, "the several communities spend from nothing to a dollar a year per capita in diffusing through public schools of the country knowledge of hygiene and observance of the laws of health.

The Bureau of Education is right in that the expenditure for health education is woefully small. The Boston Medical and Surgical Journal (Aug. 5, 1926), however, answers the bureau and also gives some worthwhile advice to Congress in a lead editorial, reading as follows:

"Still another estimate on the high cost of ill health was published recently in The New York Times and quoted in Science. It places the annual cost of medical service at $1,015,000,000 and divides this sum as follows:

Drugs, including patent medicines	$ 500,000,000
Doctors' services (estimated on basis of average income per doctor per year of $1,500)	220,000,000
Five per cent interest on the $624,000,000 of hospital investments in land, buildings & furnishings	31,000,000
Hospital maintenance	264,000,000
	$1,015,000,000

"This tabulation was commented on by Senator Ransdell, of Louisiana, in supporting a bill providing for the appropriation of $20,000,000 for the study of the cause, prevention and cure of disease. Senator Ransdell's bill, which contemplates the annual ap-

propriation of $2,000,000 a year for five years, to provide for the enlargement of the hygiene laboratory of the public health service into a chemo-medical research laboratory, provides also an additional $10,000,000 to establish an academy of health in the District of Columbia or its vicinity.

"The achievements of such private institutions as the Rockefeller institute and the Carnegie institution are recognized, but it is felt that in these institutions comparatively little time is allowed for concentrated work on problems of major importance, or opportunity given for cooperative effort of chemist, biologist, pharmacologist, therapeutist and physiologist.

"Any great effort at promoting health and studying disease must be commended, providing it is gone at wisely and its funds are properly utilized. Government management in the United States has, on the whole, been nothing to brag about in the past. It is difficult to free governmental activities from the intricacies of red tape and forms in duplicate and triplicate, and even at some times from the stultifying influence of politics. Greater opportunities provided for the public health service should be of value, for that service has always maintained the highest traditions. We hope that this bill has not been conceived in the same spirit that prompted a recent one, designed to promote the anthropometric study of our law-makers.

"We note that the estimated annual expenditure for drugs, including patent medicines, was $500,000,000, nearly double that for any other items. If Congress really wishes to save the public some money in its search for health it might begin by putting the lid on the patent medicine business. This would undoubtedly receive the hearty support of the daily press."

To which we add: Maybe!

EMIL COUE

It is rather late at this date to write about the pharmacist of Nancy, France, who died last spring, but in going through an old file we found several clippings relating to his visits to this country when he was acclaimed by thousands and his "day-by-day" motto was on the tongues of millions.

M. Coue, a rotund little man with jolly eyes, visited West Virginia on his last journey to America. The writer met him at a tea in his honor, chatted with him for a time, and was amazed to find that M. Coue, unlike the charlatans and quack healers, possessed neither bombast nor ego in his makeup. We formed the conclusion that M. Coue was frightened at the attention showered upon him.

It is said of him that he quaffed a man's sized portion of West Virginia corn liquor without batting an eye; after which a young man suffering from what is known in the vernacular as a "hang-over" remarked that there must be something to this "day-by-day stuff, after all."

But to get back to our original thought. One of the clippings is from the New York Times. It is an editorial, reading:

> With the death of Philip Emile Coue there disappears from the world a man who gained in it not a little fame, some of it earned. If, when young, he had taken the trouble to acquire a regular medical education, it is more than probable that, with his honesty, his intelligence and his real desire to lessen the pains and cure the ills of his fellow-mortals, he would have made for himself a great name in the domain of applied psychology.
>
> Probably Coue did as much good and as little harm as any of the many men and women who all through the ages have exploited the same power that was used by him. Greatly to his credit, it must be recalled that his own claims as to the extent of what could be done through what he vaguely called the "imagination" were far less than those made by some of his followers and devotees.
>
> Like every such man, he had his triumphs—his cases of cure after the regular doctors had failed or given up in despair. Like them all, too, in not a few instances, faith in his formulae delayed proper treatment by surgery or drugs until it was too late.
>
> He was not mercenary, and he deceived nobody except as he was himself deceived. His books, as were his talks, are simple and comprehensible, and therefore can be read with patience and even with profit by people with some real knowledge of psychology.

The germ of such an idea as that contained in the foregoing has been in our minds for some time. It is one of the twentieth century wonders why the quacks and charlatans do not apply what intelligence they possess to

the acquisition of a thorough medical education. Unfortunately for the public, many are not interested in such an education when they can reap the harvest of gold from a gullible population.

SECRETARIES TO MEET

The annual conference of secretaries and editors of state medical associations will be held in the headquarters of the American Medical Association in Chicago, November 19-20. The semi-annual conference of secretaries of the component societies of the West Virginia State Medical Association will be held in Charleston the last week in December, the exact date to be announced.

Concerning the national conference, a lead article appears in the October Bulletin of the American Medical Association. It says in part:

> "This annual conference of those who are most active in the administration of affairs of state associations has long been an important feature of organizational work. Its sessions are marked by helpful discussions of topics of general interest. It affords an opportunity for the secretaries and editors of all the states to learn, one from the other, about the methods used in promoting the cause of medical organization, their successes and failures and their plans for the future. It also serves to bring directly to the administrative officers of the American Medical Association information concerning conditions in the several states and about the problems with which the constituent associations must deal. Thus the state and national organizations are brought directly into contact with matters of common interest demanding cooperative consideration and action.
>
> "Any who are doubtful of the earnestness and determination of the members of this conference in their purpose to serve the medical profession of the United States will have their doubts dispelled if they attend its session. And, if they are at all interested in the advancement of medical organization, they will receive an inspiration that will stimulate them to useful service."

What has been written here anent the national conference is true in every sense of the word in relation to the semi-annual conferences of secretaries of our component societies. The secretaries' conference was organized at Morgantown. It was determined to hold year-end inventory meetings as well as a session at each annual meeting. West Virginia secretaries likely will meet this year on December 28, the date the council holds its year-end session.—C. A. R.

LEND YOUR SUPPORT

For several years it has been the policy of the editors of *The Journal* to refuse any advertising submitted by proprietary medicine manufacturers whose products are not approved by the council on pharmacy and chemistry of the American Medical Association. In the last two years the volume of business refused by the publication committee has reached a large sum.

In addition to refusing non-accepted proprietary medicine advertisements, the committee has investigated the status of all "sanitariums" and rest homes whose conduct did not bear the closest scrutiny. Several of these have been turned down.

During this year, the committee has returned two papers submitted for publication because in each it was thought that the sole purpose of the paper was to boost some particular patent medicine that had not been approved by the council on pharmacy and chemistry. Both of these papers were submitted by non-resident authors. The committee has not found it necessary to strike out reference to proprietaries of questionable standing in any manuscript submitted by a West Virginian.

It is hoped that West Virginians will continue to lend their support to the committee in its effort to keep your Journal free of questionable advertising in its advertising and news columns. Support for the committee means support for the council of the A. M. A., and for every other medical publication editor who is striving to keep his columns clean and who is constantly faced with high praise of an often-times spurious product.—C. A. R.

THE REV. MR. SPROUL

The question arises as to how much publicity should be given to a religious healer like the Rev. Mr. Sproul, whose appearance in a mammoth frame building hastily put together in Wheeling by willing workers and called a "Glory Barn" has been duly chron-

icled in these columns the first part of the year. To us, it is most interesting.

When more than a quarter of a million pass in and out of this Glory Barn in a few weeks and are led to believe the medical profession is very much circumscribed by failure and a whole lot of the preaching fraternity are futile in really understanding the hidden curative value of the Christian religion; then, and then only, is it important. We weep somewhat for our city which seems to need some kind of a cure more than any of its inhabitants. If not a cure—then a guardian. If reports are correct, Fairmont had some kind of a Sproul antigen and refused to become inoculated when solicited.

Mr. Sproul left Wheeling amidst the glorification of a multitude and with loud acclaim, went to Steubenville, but it is alleged that he returned from there with a deficit. As the Glory Barn had been torn down and the Red Sea, so to speak, had united again, the multitude heretofore full of loud acclaim lost what our foreign friends call "de steam" and the Rev. Mr. Sproul's second visit to the Wheeling auditorium was a flat failure.

You have been given the words—now write your own music. If the "cures" had been genuine in the first place he would never have had to leave this rather gullible city.

Here and there some will still feel that they are cured. Maybe they are of what they had. Doubtless the effect of the emotional appeal was real and tragic enough to remove the kind of impediments they had but as there is no way of measuring it, who can tell the harm and discouragement and hopelessness it all brought.

Will the public never learn?

It is very unpleasant to write against any thing that touches on the religious feeling of our people. Heaven knows we need some real spiritual uplift of some kind. It would be wonderful to have that uplift cure disease without the aid of the medical profession. The writer, for one, would be glad to go into something else to seek a means of livelihood. But if the uplift comes it will be simple, dignified and big as the universe. It will not be commercial.

So, in the final analysis, the moral is that in all crises of disease and illness, just around the corner is the regular physician to whom finally everybody must approach seeking relief. He, and he alone, is the sheet anchor on whom all must depend after all else is tried and found wanting. He is not omnipotent. He is not infallible. He is far from perfect.

But just as we are today, with nothing more tangible in sight, he alone stands as the levee against the floods of disease. It would be well to make his part far easier than it is.—H. M. H.

PURGATION

There is obviously much need for reform in regard to the indiscriminate and lavish, I might also add, reckless use of purgatives, such, for instance, as castor oil, on all occasions, by the laity.

In a large percentage of cases having obstruction symptoms of the bowel, whether due to direct mechanical causes, such as, intussusception volvulus, adherent appendix, or to appendicitis with local peritonitis, or to local peritonitis, caused by perforations or by pelvic infections, strong purgatives have been given, and as a result the patient that may have been on the border line with some nausea, little or no vomiting, some little distention, a slightly increased pulse rate, is pushed over the grade and becomes an actively definite case of obstruction.

Even after a surgical operation there is a tendency, unfortunately, on the part of many to resort to purgation. The doctor is continually being importuned by patients and relatives, to know if it would not be advisable to give so and so, purgatives. It is the old story of not being willing to give nature a chance to readjust and reassert herself.

I am more and more impressed with the fact that castor oil is not an unmixed blessing. During the World war, I received a communication from some department in Washington, requesting that our hospital economize in the use of castor oil; that it was needed to lubricate the airplane motors on the battle front. I wrote these people, saying that so far as I was concerned, the war department was more than welcome to all the castor oil, that I did not prescribe it

and that we were not going to purchase it for the hospital.

I remember as a medical student, years ago, that one of our teachers in the classroom strongly advised that everyone should take a purgative, such as C C pills, at least once a week. I consider this sort of teaching most pernicious.

I recall a lady, middle-aged, of more than average intelligence, who told me that for twelve years past, she had taken calomel once a week and had also washed her stomach at least once every day, perhaps as a result of this prolonged series of insults to her body she became a cardio-renal case and died probably twenty years earlier than she should have.

We today, see patients suffering from constipation, who, instead of treating themselves by diet and exercise and if necessary, the mildest sort of laxatives, dose themselves severely with magnesium sulphate, phenolax or other equally unphysiological remedies.

Although it has been well known and established for many years that the continued ingestion of phenolphthalein will cause the development of albumin in the urine, this substance is continually being used by the laity.

The primitive savage, living under natural and reasonably favorable conditions did not have to drug himself. A fairly varied diet, neither over-prepared nor over-cooked, kept his intestinal tract in a fair condition and exercise and life in the open did the rest.

—J. E. C.

MEDICAL ETHICS

Dr. M. Porzio of Rome, who so freely jumped into the public prints with his criticism of American surgical methods following the death of Rudolph Valentino, is taken to task in an editorial appearing in the October issue of the *Atlantic Medical Journal* under the above heading. It reads:

"For a long time, advertising by a physician has been considered unethical by the medical profession. In the United States we are governed in the respect of ethics by the 'Principles of Medical Ethics,' as adopted by the American Medical Association, which is published in pamphlet form, and a copy placed by courtesy of the Association in the hands of the graduates in medicine of all the medical schools each year in this country, for their guidance.

"It would seem that in some respects the regulation of ethics is more strict under the regime of the British Medical Association than of our national medical association. The press recently chronicled the fact that a furor had been caused in British medical circles. The conflict grew out of the use of Sir William Arbuthnot Lane's photograph, without his knowledge, in connection with an article entitled 'The Athlete's Diet,' on the back of menu cards in a chain of popular restaurants. It is stated that the protest made by the British Medical Association against this 'personal advertising' necessitated the blocking out of the picture by means of 40,000 stickers. The Association denounced him, although he had resigned from membership about a year earlier over differences with the organization.

"At that time, Sir William declared, 'In England, if any one writes to newspapers and signs his name, the so-called Ethical Committee comes down on him and asks what business he has to educate the public. It is a self-constituted body with no right to exist, which writes rude, insulting letters to people. In America you can write freely to the newspapers, educating the people.'

"As stated in *Time*, 'Sir William is wrong. The United States doctor does not write freely to the newspapers, and reputable newspapers often complain that it is not easy to get information from the United States doctors.'

"When Mr. Lane was in attendance upon the session of the Clinical Congress of the American College of Surgeons held in Philadelphia in 1925, he laid stress upon the use of improper food stuffs as a cause of carcinoma. Publicity was given to his utterances at that time by the press in this country, with the idea that much valuable information was being given the public regarding the preservation of health. As preventive medicine is the real aim of the medical profession, if the rule were meticulously applied that no publicity should be given by the lay press, dis-

coveries of great importance might with difficulty be brought to the general attention.

"It is difficult to resist the conclusion that one reason for the attitude of the British Medical Association is commercial rather than ethical, as doctors like members of other professions, often can profit by popular ignorance. But no one, for a moment, possibly could accuse so distinguished a surgeon of resorting to the procedure of which he stands accused, for his personal aggrandizement. Such a proposition is too ridiculous to be mentioned.

"About the same time, Dr. M. Porzio, the eminent surgeon of the Rome (Italy) Polyclinic, was attributed with the statement that 'American surgical methods killed' a well-known film star who recently died, and further that 'he is the second prominent Italian to be killed by American surgeons,' the first being at the time of his death, the world's most distinguished tenor. Dr. Porzio is further credited with having said, 'I esteem highly the research work of American laboratories, but I have no confidence in American surgery, etc.' In his statement Dr. Porzio attacks the surgeons of this country in regard to their results in the treatment of appendicitis, claiming that 'the percentage of deaths from appendicitis in the United States is the highest in the world.'

"On the other hand, we are of the opinion that published statistics of surgical clinics will show that those of the United States are far superior to those of any other country, including Italy. In the first place, the film star did not die from appendicitis but from septicemia, subsequent to rupture of a gastric ulcer while it will be recalled that the operatic star's death was from empyema of the chest. Records of the treatment of both patients reflect credit on the American physicians and surgeons in attendance.

"It seems so ridiculous that Dr. Porzio should make such a comment, more especially to the lay press, about patients whom he did not see, and when he has no personal knowledge of the conditions that were present before, during or after operation. While there is no international code of medical ethics, yet the high ideals of our guild are universally the same, and it would seem to us that the statements of Dr. Porzio are in ill accord with the Hippocratic oath."

REPORTS FROM COMPONENT SOCIETIES

Brooke

The Brooke County Medical Society held its first fall meeting Tuesday evening, October 5th at Wellsburg. Dr. Gabriel Tucker, eminent bronchoscopist of Philadelphia, was the speaker of the evening, and his demonstration by lantern slides of the work of Dr. Chevalier Jackson's Clinic met with much approval. The value of early recognition of foreign bodies in the trachea and esophagus by the aid of the fluroscope and X-ray and their removal by means of the bronchoscope and esophagoscope was stressed. No doubt we have at one time or another passed up a diagnosis of one of these conditions for many of these foreign bodies are removed after a long period of time in the trachea or bronchi and only after a careful fluroscopic and radiographic examination. Dr. Tucker demonstrated a number of lye burns of the esophagus and urged us all to assist in the eradication of this evil by making it illegal to sell lye not properly labelled as a poison.

We are certainly indebted to Drs. Fawcett and Hall of Wheeling through whose efforts Dr. Tucker consented to come to us. The meeting was a 100 per cent society meeting, all the members being in attendance. A number of visiting doctors also attended from Wheeling and Steubenville and were all highly in praise of this instructive meeting.

Drs. Bernstein, Abersold and Nolte attended the Inter-State session at Cleveland, October 18 to 22. The doctors from the Northern Panhandle were well represented at this conference.

The officers for the ensuing year are: President, George W. Abersold; vice president, W. P. McMullen, and secretary and treasurer, J. Schulz. The meetings of the society are

held the first and third Thursday of each month—each member in turn holding meeting at his home. In this way we consider our society a big family, more ethical and friendly to one another. The program this year will consist of one out of town speaker each month and we have already the promise of several prominent medical men from Cleveland and Pittsburgh. We certainly do not boast of having a large society but we do have one in which all the members are deeply interested and we look for a bright future ahead for our Brooke County Society.

—H. F. NOLTE.

[EDITOR'S NOTE—It is now illegal to sell concentrated lye or similar substances unless each container is labelled "Caustic Poison" with the skull and cross bones in red ink. Violators are liable to fines of from $50 to $500 under the act passed by the 1925 legislature.]

Kanawha

The Kanawha Medical Society held its first meeting of the Fall on September 7th, at the Kanawha Hotel.

Dr. E. P. Sloan of the Sloan clinic of Bloomington, Ill., former president of the American Society for the Study of Goiter, addressed us on the Medical, Surgical and X-ray Treatment of Goiter. A movie reel showed the speaker's technique and he proved a splendid speaker and an entertaining guest. A large attendance came out, dry clinic patients were demonstrated and a full discussion followed the talk.

A buffet supper was served afterwards.

The second Fall meeting was changed from the regular Tuesday to Monday, September 27, to accommodate Dr. Howard T. Phillips of Wheeling.

Dr. Phillips was the only speaker of the evening and gave an interesting and instructive talk on the skin as seen in general practice. Treatment was brought up-to-date and excellent lantern slides were shown to emphasize the speaker's text. It was a pleasure to have such a good speaker and a man so well grounded in his own line. West Virginians need not send out of the state for specialists on the skin.

At this same meeting in business session our society approved a series of advertisements dealing with the problem of interesting the public in paying their doctors more promptly. It was decided to let the newspaper solicitors canvass the doctors in the district for money to pay for these ads. These ads are approved by the Professional Relations Committee of the State Association and fill a long-felt need.

The names of two applicants for membership were read—Dr. C. C. Carson and Dr. Ray Ira Frame of Sharples.

The twelfth meeting of the year was held October 5. Dr. John Thames was introduced as the new full-time health officer of the county and was welcomed as a new member of the society. Dr. Bankhead Banks of Charleston read a paper "A Method for the Drainage and Irrigation of Empyema and Other Abscess Cavities."

In business session, Drs. C. C. Carson and R. I. Frame of Sharples, W. Va. were elected members. Then Dr. R. H. Dunn made a report on the status of Mr. Lazare who has been practicing medicine in Charleston. This matter was left in the hands of Dr. Thames as police officer of the county in medical matters.

On October 19, the society was addressed by Dr. R. C. Hood of Clarksburg, a pediatrist, his subject being "Intestinal Colic in Children." This proved an interesting paper and we feel the Harrison County Medical Society is to be complimented in having such an able member. Now that the state is being made passable by good roads we hope to secure more West Virginians and less outside talent for our meetings.

In business session, the plan put out by the A. M. A. for medical relief in disaster was discussed and approved.

Following the meeting a buffet supper was served in the dining room.

T. M. BARBER, *Secretary.*

Ohio

A symposium on the toxin-antitoxin campaign for immunization against diphtheria and a paper by Dr. Harry M. Hall on "Some Matters of Importance to the Doctors of West Virginia," constituted the program of the first October meeting of the Ohio County Medical Society. Those presenting the sym-

posium were Drs. W. H. McLain, C. H. Keesor and D. A. MacGregor. The toxin-antitoxin campaign was endorsed heartily. A delicious buffet luncheon was served by the Elks' Club staff. We hope some of the men from distant parts will drop in and participate in our meetings.

On October 8, Dr. William F. Reinhoff, Jr., of Baltimore, addressed the regular meeting on "Hyperthyroidism and Its Relation to the Origin of Some of the Benign Tumors of the Thyroid Gland." It was illustrated and the discussion was led by Drs. E. M. Phillips and D. M. Aikman.

Dr. Reinhoff should be on the program of every up-to-date medical society that can get him to come. He talked extemporaneously but he is writing for the thyroid section of one of the forthcoming editions of *Practices of Medicine* and you may get his views there. He will upset some of your ideas and very much toward the simpler view. Perhaps you have been one of those who felt somewhat chagrined when all these goiter classifications were going on and you were told it was easy to differentiate. Well, he says it is not easy and what is more, impossible in much of what we see. He has slides of the operation he does and they are very illuminating. If anything he is too modest but he is an ideal talker.

NOTES

The staff of the Ohio Valley General Hospital met the second Tuesday in September. H. M. Hall was re-elected president; George Vieweg, vice president; A. L. Jones, secretary. Dr. Scullard, pathologist, read a short article on "Chocolate Cysts of the Ovary," mentioning particularly that they usually were overlooked.

A number of doctors from Wheeling attended the Inter-State Post-Graduate assembly in Cleveland.

Dr. W. P. Sammons has been one of those to choose Canada as a vacation resort. The batting average of Canada in this section is like Babe Ruth's.

Dr. John Gilmore has returned from a visit in Denver.

Dr. Robert Reed has been somewhat indisposed but is back on the job again. He was one of those who went to Cleveland. He is fortunate in having Dr. Robert Reed, Jr., to step in and relieve him. On prescriptions they sign their names alike and so it looks like good advice to name your son after yourself. With some of us, with only a girl it looks a little hazardous.

Dr. W. S. Fulton is still on a tour of Europe.

Dr. George Vieweg, who stands high in the Shrine up here, has just been instrumental in obtaining Monument Place on the National Highway for that body. Henry Clay made this place immortal to history lovers.

Dr. Albert Nolte recently suffered from an infected wound in a finger. It was necessary to have it opened under general anesthesia.

The Wheeling school board, two of its five members being doctors, are having a big fight to erect a new stadium. It seems with the aid of Charles Seabright your colleagues, Drs. Henri P. Linsz and E. L. Armbrecht, will win out. —H. M. H.

Cabell

A meeting of the Cabell County Medical Society was held in Hotel Prichard, September 30, 1926, Dr. J. A. Guthrie presiding. Minutes of the previous meeting were read and approved. The applications of Drs. James H. Baber and Tib N. Goff were read and turned over to the Board of Censors.

Dr. Rader, chairman of the professional relations committee of this society, discussed the proposed advertisement in the newspapers of "Pay Your Doctor" advertisements as gotten up by the state professional relations committee. He then moved that it be tabled. This was seconded and carried.

The program for the fall meetings was discussed. We look forward with interest to the next meeting when Dr. Friedlander will talk on diseases of the heart.

Dr. W. F. Beckner then read a paper on Acute Otitis Media, taking up etiology, diagnosis, complications and treatments, stressing the early puncture of the drum to prevent complications. This was a delightful paper and was discussed by Drs. Marple, Hoitasch, Gibson, Hunter, Poliakoff, Sloan and Biern.

Dr. Vest read two letters from the State

Secretary regarding the shortage of literature for *The Journal*. He urged the members of the society to co-operate with the secretary in this matter. Treasurer's report was read and showed a balance on hand of $871.89. Dr. Swann moved that the treasurer buy $600.00 worth of Liberty bonds. Seconded by Dr. Tom Moore. Ofter some discussion it was carried. The attendance was 25. C. G. WILLIS, *Secy.*

Mercer

The Mercer County Medical Society held its regular meeting September 30 with a fine attendance. Clinical cases were reported and a symposium on 'How Many Deaths Have I Had, Both Mother and Child in Obstetrics, and How Can I Best Prevent Them in the Future," was presented by Drs. A. H. Hoge, Ben W. Bird, E. W. Horton and B. S. Clements. The papers were discussed by Drs. W. C. Slusher, John H. Bird and W. H. Wallingford.

The secretary, Dr. Harry G. Steele, urged that the society nominate three or four members to read papers before the sixtieth annual meeting of the state association to be held in White Sulphur Springs next June.

The Woman's Auxiliary also conducted a business session.

STATE AND GENERAL NEWS NOTES

RED CROSS FIGHTING MODERN PREJUDICES *

Combating superstition and prejudice against modern medical methods forms an important part of the work of the more than 835 Red Cross public health nurses operating in various parts of the United States in connection with Red Cross local chapters.

Removing such prejudices is some times more difficult than many people realize, who are not acquainted with the strength which "handed down" legends and cures have attained. There still are people in the United States who attach more credence to these ancient beliefs than they do to modern medical discoveries.

Many of these outworn "treatments" resemble boyhood prescriptions for warts, being of the "dead cat at midnight" or stump-water variety. These beliefs even extend to witchcraft, one instance being reported of a woman who was treating a child for "evil spirits," which afterwards were found to be epileptic fits, by resorting to some superstitious routine which had been current practice in the Dark Ages.

The practical value of the public health nurse, as well as the work of such other Red Cross branches as the First Aid and Life Saving Services, in assisting the physician's task throughout the United States is demonstrated constantly. How many cases of infected injuries are warded off by the first aid instructor's warning against such practices as the use of cobwebs to staunch bleeding, or similar dangerous methods, can be estimated by any one who is familiar with the widespread currency of such erroneous treatments. Oftentimes the application of scientific first aid methods as taught by Red Cross experts has meant that when the doctor arrived, he has found only a straightforward case presented to him, uncomplicated by infection, or by bungling attempts to render treatment by persons whose intentions were better than their ability in such emergencies.

The unceasing war of the medical world against epidemics is rendered more effective also through the public health nurse. For example, the Red Cross, through its corps of nurses, is urging every un-vaccinated person in the United States to follow the warnings of health authorities that they be vaccinated immediately. This advice is based on the discovery by health authorities that the menace from smallpox is growing greater every year; the number of cases found in the District of Columbia and forty states of this

*EDITOR'S NOTE—It has been the custom of this Journal to annually publish articles in support of the Red Cross Roll Call. This is the second this year.

country, and eight provinces of Canada in 1924 being nearly double those of the previous year. This gain by a dread disease is attributed to a growing population of unvaccinated people. It has been declared by authorities that continued neglect of this simple preventative is to invite a return of the old conditions when sporadic epidemics wiped out whole communities.

The public health nurse goes into schools and communities, and through her efforts many times, large groups of children are reached who are in need of simple medical and dental treatment which if received in time, often saves much greater suffering at a later period. Her lectures to housewives and young people on simple health measures such as proper heat and ventilation in the house, undoubtedly do much to reduce illness and suffering from colds and even more serious diseases. At the same time the knowledge she imparts on important health subjects makes her hearers realize the importance of not neglecting to have ailments attended to by competent physicians, and not to ignore symptoms which if attended to by prompt medical treatment may save more serious illness.

The Nutrition Service of the Red Cross likewise plays its part in health by spreading accurate and approved knowledge of the principles of food in relation to health. Statistically speaking, 4000 adults and 114,000 children received such instruction in the past year. The public health nurses taught care of the sick in the home to 65,000 women and girls, besides carrying on other important services. First aid instruction was given to 19,000 persons.

The Red Cross maintains special representatives with hospitals where ex-service men are under treatment, cooperating with the medical authorities in promoting their recovery; the Junior Red Cross pays special attention to children in hospitals, as well as to the disabled veteran.

These services cover a wide field in themselves, yet they are only a part of the Red Cross work for the United States. All Red Cross service is performed in the name of the country by reason of the nation-wide membership in the organization. Through the Annual Roll Call, November 11 to 25, the opportunity is extended to other thousands to also join.

LEGISLATIVE AND PUBLIC POLICY COMMITTEE MEETS

Anticipating a vast amount of work with the beginning of 1927, the public policy and legislative committee met in Charleston October 10 in an all-day session and took under consideration many matters affecting the welfare of the profession and the public health of the state. The minutes of the meeting, approved by Chairman Ireland, are as follows:

Pursuant to a call issued by the chairman, Dr. R. A. Ireland, the public policy and legislative committee of the West Virginia State Medical Association met in the Association headquarters in Charleston, October 10, 1926, at 10:00 a. m. Those present were Drs. R. A. Ireland, chairman; R. H. Walker, and James McClung, members, and Mr. Sterrett O. Neale, ex-officio secretary. Because of a train wreck Dr. D. A. MacGregor of Wheeling was unable to be present. Other absentees were Dr. George A. MacQueen of Keyser, and Dr. James R. Bloss, president of the association and ex-officio member. Following the roll call the order of business was read by the secretary.

On motion of Dr. McClung, seconded by Dr. Walker, the committee went on record as favoring an amendment of the state law relating to hotel and boarding-house bills to include board and room bills for hospitals.

The matter of annual re-registration of physicians then was considered. The secretary read a communication from the American Medical Association and also one from the Oregon State Medical Society. On motion of Dr. McClung the committee unanimously voted against any such proposal for West Virginia. The committee took the view that re-registration each year would necessitate the payment of a fee, or in other words a tax on the privilege of practicing medicine in West Virginia. It was pointed out that such registration would necessarily entail a fee of two or three dollars a year, possibly more, per doctor, to pay the cost of the registration

alone, and in view of the fact that the full-time health unit plan is making such rapid strides in the state it was believed that compulsory registration is not a necessity at this time.

The matter of amending the state law to make it compulsory for county courts to create full-time health units was brought up by Chairman Ireland. The committee, after a lengthy discussion, voted unanimously that the law remain as it is, leaving it optional with county courts on the establishment of such units. During the discussion Dr. McClung expressed the view of the committee when he said that the plan was only in its infancy in West Virginia, that if it is worked out successfully in the larger counties, that there was little doubt but what it would be adopted in the smaller counties. He also pointed out that several of the smaller counties had virtually inaccessible areas during several months of the year, and that a full-time health officer would be unable to reach these districts because of lack of roads.

By unanimous vote the committee reiterated that the Commissioner of Internal Revenue should amend his ruling so as to permit doctors to deduct from their income tax reports those sums expended in taking post-graduate courses and attending medical meetings.

Next under consideration was chapter 23, Acts of the Legislature of 1925, known as the Nurses' Bill. This law was discussed at length and certain changes were recommended in the interests of the public. These changes were to be incorporated in the report to be considered at the next meeting of the committee. The same instructions were given in connection with chapter 22, Acts of the Legislature of 1925, otherwise known as the act licensing mid-wives. It was stated by Chairman Ireland and echoed by Drs. Walker and McClung, that the mid-wife bill had failed of its purpose. It was stated that it was intended to assist expectant mothers in rural districts where the services of a licensed practitioner of medicine were not available. However, it was pointed out that it only had served to license mid-wives in the most populous areas of the state, where physicians were available at all hours of the day or night. It was further stated that the qualifications required by law were insufficient. It was also pointed out that the present law carries no penalty clause for violation of the act.

By unanimous vote in motion of Dr. Walker the committee opposed any extension of the so-called Sheppard-Towner Act, by Congress.

On motion of Dr. Walker, the committee recommended the appropriation of $100,000 a year for state charity in the care of medical, surgical and obstetrical cases in hospitals in the state. His motion specified that the money be expended only for board and room and nursing care, at the rate of $2.85 per day, this sum being that paid by the Workmen's Compensation Department in cases of injured employees.

On motion of Dr. McClung, seconded by Dr. Walker, the committee recommended that the budget commission present to the next legislature an increased appropriation for the State Department of Health. The motion was carried, with the proviso that the increased appropriation as granted by the legislature, should not be used for the purpose of creating more jobs at state expense, but was to be used in the educational program, and in more strict enforcement of the medical practice and kindred acts.

On motion of Dr. Walker, it was also recommended that the budget commission give serious consideration to the proposal for increased salaries for members of the faculty of the School of Medicine of West Virginia University.

The executive secretary was instructed to prepare a letter to all candidates of the legislature, urging the most careful consideration of all matters pertaining to the public health.

On motion of Dr. McClung, all county societies were urged to appropriate sufficient funds from their treasuries to pay for the cost of annual subscriptions to *"Hygeia"* for members of the legislature in their respective areas.

On motion of Dr. Walker, an amendment to the present workmen's compensation law to permit the workmen's compensation commissioner to appropriate not exceeding $800 in any one case, for the rehabilitation of in-

jured employees, was approved.

Since many of the matters under consideration are of great importance to the hospitals of West Virginia, the motion was adopted that Dr. George A. MacQueen, president of West Virginia Hospital Association, call a meeting of that association, within the next six or eight weeks to consider the matters.

Prior to adjournment Dr. McClung offered the following motion:

"Mr. Chairman: I move you, sir, that the public policy and legislative committee of the West Virginia State Medical Association go on record as being opposed to the candidacies of those members of the legislature seeking reelection, who voted for the Chiropractic Bill in the last session, such opposition being based upon the grounds that little or no regard was shown for the public health or welfare of the citizens of our state in the enactment of the law, that the bill lowered the educational qualifications required of those who would treat the sick, and it is dangerous to the public welfare to have such men in public office, where they are continually called upon to judge what is best in health legislation for the people of our state."

The motion was carried without dissenting voice.

The committee thereupon adjourned at 5 p. m. to meet at the call of the chairman.

HOSPITALS PROTESTING LOW INDUSTRIAL FEES

At the close of the annual meeting of the American Hospital Association in Atlantic City October 1, resolutions were adopted designed to do away with the practice of hospitals caring for workmen's compensation cases below cost, according to the New York Times.

After reciting the present necessity for calling for charitable contributions to make good the deficiency created by the treatment of those patients without adequate payment, the resolution concluded:

"Be it resolved that under present conditions the burden of proper treatment of compensation cases is oppressive, unjust and contrary to all economical principles, and that, therefore, this association make every endeavor to require that hospitals and physicians shall receive recompense in every workman's compensation case sufficient to pay the cost thereof, and that our trustees be requested to make such effort as they deem expedient in the effort to terminate the present intolerable conditions as quickly as possible, in order that hospitals may be better enabled to properly carry on their work for the economic and social benefit of the communities which they serve."

It was voted to create a special committee to obtain reductions in fire insurance premiums.

The new officers elected today were: President, Dr. Joseph C. Doane, Philadelphia, General Hospital; First Vice President, Dr. Louis H. Burlingham, Barnes Hospital, St. Louis; Second Vice-President, Miss Lucia Jacquith, Memorial Hospital, Worcester, Mass.; Third Vice President, Dr. John D. Spelman, Touro Infirmary, New Orleans; trustees, Dr. A. K. Haywood, Montreal, General Hospital, and Margaret Rogers, St. Luke's Hospital, St. Paul; Treasurer, Asa S. Bacon, Superintendent, Presbyterian Hospital, Chicago.

Dr. Bern Birsch of New York discussed the physiotheraphy department of hospitals at the general session and said that institutions were faced with the problem of adding such a department. Physiotherapy, he said, was designed to shorten the period of invalidism and accomplish a more perfect recovery.

Dr. William H. Walsh, executive secretary, announced that a plan had been mapped out for cooperation of the association with the National Society of Penal Information to improve hospital conditions in prisons.

LOCATES IN CHARLESTON

Dr. R. R. Stuart, who formerly practiced for eight years at Gary, McDowell county, has returned to West Virginia from Boston, where he took a two-year course in pediatrics. He is locating in Charleston where he is to specialize in diseases of infancy and childhood.

STATE TEACHERS SHOULD HOLD HEALTH PAPERS

[From the Charleston Gazette]

While West Virginia does not have a law which compels teachers in the different schools to present a certificate of health after a physical examination as to their fitness, yet Dr. William T. Henshaw, state health commissioner, has asserted that all of the teachers of the state should have such certificates and that the boards of education throughout the state should take steps to compel the teachers to have examinations. He says that there are more than 3,000 teachers in this state who are teaching here for the first time and that they should be compelled to undergo a physical examination in order that defects may be corrected.

In addition he urges that the teachers who have seen service should also be compelled to undergo physical examinations in order that it may be determined whether their health is in such condition that they may mingle with children of school age. He stated that a healthy child should not be under the care of an unhealthy teacher.

Many teachers are suffering from communicable diseases which can be cured and in this way the pupils in the schools are protected. He points out that there is an extensive campaign being waged to make the children from the first grade upward physically fit to enter school and says that the teachers who are to be in charge of the children should also be physically fit.

He pointed to the investigations which have been made by the state department of education and said that the board is investigating the matter of the physical fitness of teachers at this time and has taken the position that teachers who are nervous and irritable from physical ills have no business in the school rooms of the state.

In going over the reports which have been made by other states he said it had been found in Illinois that 60 per cent of the 50,000 school teachers in that state lose practically 200,000 days annually from illness and that the cost to the state is practically $1,000,000 a year. He said the same relative conditions would probably be true of West Virginia if an investigation of the subject were made and the figures were available.

During the coming session of the legislature an effort will be made to empower the state board of education to list as one of the requirements for a teacher's certificate in this state, a health certificate, showing that the teacher is free from communicable diseases. Also examinations every year would be required. Dr. Henshaw said that in many cases illness in school children is directly attributable to the illness of the teacher.

ASSOCIATION'S BUILDING COMMITTEE IS SELECTED

President James R. Bloss, pursuant to authority given by the House of Delegates at the fifty-ninth annual meeting in Morgantown, has designated the members of the association's committee on a permanent home as follows:

W. P. Black, Charleston; L. V. Guthrie, Huntington; C. O. Henry, Fairmont; E. L. Armbrecht, Wheeling, and W. B. Stevens, Eckman.

The matter of a permanent association building in Charleston was recommended to the House of Delegates by President Bloss in his presidential address (*W. Va. Medical Journal*, page 283). The house's committee reported favorably upon the recommendation and the president was instructed to designate a committee of five to inquire into the feasibility of such a future program.

Dr. Black anticipates much work ahead before the committee has an actual, definite report to make. It is probable unless there is a concerted approval of the plan by all of the membership, that just a preliminary report will be made at the sixtieth annual meeting. However, the Kanawha Medical Society is interested and is to designate a committee to cooperate with Dr. Black's committee.

Recently a letter was received from a member in the coal fields inquiring as to the possibility of creating a medical library. He pointed out that it would be a marked convenience for members throughout the state.

One of the tentative plans the committee is to consider is the erection of a building

housing not ony the executive offices but a library and museum, committee rooms and a large assembly hall. Such an edifice undoubtedly would be a lasting monument to the medical profession in West Virginia. It would afford a headquarters for all visiting members. It would afford a package library service and give them a place in which to follow up their studies of any subject. As it is now, members must go to Cincinnati, Columbus, Pittsburgh or an eastern city to find complete references and literature.

The library service is one of the most important features stressed by the Wisconsin Medical Society. Many members believe it should be incorporated in the West Virginia State Medical Association's endeavors.

COMMUNICATIONS

TO THE EDITOR:

I have just finished perusing the following article from the issue of September 21, 1926, of the *New York Times:*

The New York Medical Week, official organ of the Medical Society of the County of New York, in discussing a legislative act proposed some months ago relative to the proper qualifications of anesthetists, declares editorially that the practice of any branch of medicine by other than licensed physicians is not only detrimental to the advancement of scientific study but to the best interests of the patient as well. The bill in question sought to limit the administration of anesthesia to licensed practitioners.

"It was surprising," says the writer, "to note how many physicians and hospitals were opposed to the project."

"At this time it is almost platitudinous," he continues, "to assert that modern surgery owes the tremendous strides that it has made largely to the development of anesthesia. Aside from the procedures he makes possible, the anesthetist today is the guardian of the general physical condition of the patient during surgery. It is true that in many simple, uncomplicated cases a nurse or other technician is capable of giving an anesthetic without harm to the patient. Many surgical emergencies are unforeseen, however, and it is in such cases that the advisability of having a qualified physician to administer the anesthetic is seen. How many delicate cardiac cases owe their successful outcome as much to the skill and watchfulness of the anesthetist as the ability of the operator!

"The chief objection raised against the suggested bill was that it would make it very difficult to procure an anesthetist for service emergencies at unusual times. Where a proper anesthesia staff is organized, this should be no more difficult than to obtain the services of a surgeon or medical man. First of all, the house men should be trained in anesthesia as they are in other specialties."

The law is very explicit in all civilized countries in forbidding the use of dangerous drugs by others than duly qualified physicians.

Anesthesia in most experienced hands is always fraught with great danger and its borderline lies close to the requisite dosage to obtain anesthetic action. Nevertheless there are many (FAR TOO MANY) physicians who permit the administration of the anesthetic by a non-medical person. This is only permissible when immediate action is imperative and no qualified medical person is available for the administration of the anesthetic. To permit any other than a medical man to give such a drug, with his personal and undivided attention throughout its administration, is unlawful and morally unjustifiable exposure of human life.

WILLIAM S. MAGILL, M. D.

Morgantown, W. Va.,
October 3, 1926.

BOOK RECEIVED

Practical Dietetics for Adults and Children in Health and Diseases, second edition, $4, F. A. Davis Company, Philadelphia.

Defective Memory, Absentmindedness and Their Treatment, by Arnold Lorand, Carlsbad, Czecho-Slovakia, F. A. Davis Company, Philadelphia.

Practice of Physiotherapy, by C. M. Hampson, M. D., the C. V. Mosby Company, St. Louis, Mo., $10.00.

The Surgical Treatment of Goiter, by Willard Barrett, M. D., F. A. C. S., St. Louis Mo., with foreword by Dr. Charles H. Mayo of Rochester, Minn., the C. V. Mosby Company, St. Louis, Mo., $8.50.

Cannula Implants and Review of Implantation Technics in Esthetic Surgery, (two parts) by Charles Conrad Miller, M. D., the Oak Press, Chicago, Ill., $2.00.

DEATHS

Amos McCandless Reid

Suffering from a complication of diseases, Dr. Amos McCandless Reid, widely known physician in southern West Virginia, died in a Charleston hospital October 23. He was 46 years old and had been a member of the state association since 1913.

Dr. Reid was born in Clarion, Pa. He was a graduate of Staunton Military academy and of the College of Physicians, Baltimore. He was a 32nd degree Mason, a Shriner, an Elk and a Knights of Pythias and a deacon in Bream Memorial Presbyterian church. He had practiced in Charleston 16 years.

His wife and two daughters survive.

SOCIAL SERVICE AND "THE OTHER FELLOW"

(Ohio State Medical Journal)

Some pointed remarks concerning the immense growth of social service work and the distortion it has undergone in many respects appear in a current issue of American Medicine.

"It is simply the same old story," that publication declares: "a movement which starts out with great enthusiasm and seems to promise distinct aid to all concerned, turns out to be, through misconception or excessive zeal or perhaps, even the greed of individual workers, a monstrosity which quickly gets out of hand.

"How to keep social agencies within proper bounds is something of a problem. For example, we have had much discussion concerning the education and rightful place of the trained nurse with respect to her relationship both to physician and patient. This is another problem which is by no means settled, but only through open discussion can we hope to get anywhere."

Not long ago, the wife of a well-known church official made inquiry as to how she should be able to have the missionary hospitals placed upon the mailing lists of several medical journals without cost. The problem of social service was broached. During the course of the discussion, she complained about obstetrical fees as being too high, adding that her son, residing in one of the largest American cities and a lawyer by profession had been compelled to pay $150 for the "before, during and after care" of his wife.

This woman's husband, as a church official, is paid quite a sizeable salary annually; for special lectures, he has received, so rumor has it, as much as the total bill of the obstetrician; he writes books and collects royalties; he receives reductions from various commercial houses because of his calling, he is furnished a home without cost, and most of the ordinary things needed to furnish this home are given to him by his interested congregation.

For a minister to receive over one hundred dollars for a lecture and for his congregation to furnish him a house of imposing architecture and partly outfit it, in addition to paying a salary of a good many thousand dollars, is legitimate, necessary and all right with this woman. But for a physician to charge a fair sized fee, is neither just nor Christian.

It would seem that a number of these women and men who are actively connected with social service work are either misinformed as to the scope of some of the work, or have failed to fully investigate the work.

Most anyone can find fault with the charges, income, work and ability of "the other fellow." It is doubtful that this woman would be able to find a single physician in all the various congregations of the church she is affiliated with, who would question for one instant the wages paid this minister.

One of the principal themes of this particular "church official" and his wife has been that everyone should "endeavor to see the other fellow's viewpoint." The old adage about "practicing what one preaches" has apparently been lost in the shuffle. We believe, however, the awakening will come and social service will be ultimately confined to the legitimate channels of charity, where it is invaluable. However that time often seems remote indeed.

ADAMI—AN APPRECIATION

By WILLIAM S. MAGILL, M. D.
Morgantown, W. Va.

Among the younger members of our profession, other than the name of Osler there is perhaps none better known nor more highly honored than that of Adami (John George) whose death at 65, as Vice Chancellor of the University of Liverpool has now terminated a career of remarkable ability and industry. Preeminent as pathologist, the author of our best text book on this subject in the English language; with the exception of our own great pathologist—Welch of Baltimore—the most gifted leader and teacher of this and its allied sciences has been noted in a suitable obituary in the last issue (Sept. 25th) of the Journal of the A. M. A.

Neither Osler nor Adami were natives of this country, nor did either derive any of their education or training here. We may, however, claim the honor of early recognition of their ability. Both of these honored men of our profession made their reputation and developed their great careers as the outstanding men of their time in one of the greatest medical schools of this continent—McGill University at Montreal. There was accomplished the building of the fame of Adami, the publication of his great text book which, adopted throughout the English speaking schools of medicine, from its first appearance in 1913, has made him even more widely known than Osler.

Others have, and will extensively review and extol the author and his scientific and administrative work in terms of highest eulogy which are merited; we will dwell here only on the personal traits of the man we knew since the beginning of his medical career.

A plain, straightforward character; a clear active mentality trained in the scientific method of the Pastorian school; a great reader and critical thinker, he brought to his work the preeminent quality of just balances in his dealings and judgment of men and their works.

Slightly deliberate in word and action, he never failed of the just tone and measure of his attitude towards men and things and no one ever appeared so devoid of jealousy and so eager and frank in giving praise or tribute to others when merited.

Two subjects of this year (1926) show by the attitude of Adami thereto exactly this quality, the quick, full praise of achievement of others.

When the long and brilliant investigations on the subject of cancer and their therapeutical achievements of Dr. Bell of the Liverpool Institute establishing for the first time a base for successful therapy, appeared last spring, there was nothing that so invited our belief and hope in the future and fullness of that work so much as Adami's prompt short statement, "The results we are obtaining are so great that we cannot further keep silence."

When Calmette so recently brought forward his great accomplishments in the prevention of tuberculosis, without a moment's delay we find Adami saying in the Lancet, last May, "Calmette's discovery of the manner in which such acquired immunity may be extended to the whole people is the greatest and most notable advance in the arrest of tuberculosis accomplished in our generation. * * *"

Quick, prompt acknowledgement and immediate advocacy of established progress in medical sciences is so rare, that this quality and life principle of Adami—great as he is in so many other qualities—nevertheless marks him as worthy of the highest tribute of all who are marching forward for the world's progress and safety.

TRAVEL STUDY CLUB

At the completion of its recent European Study Tour, the Travey Study Club of American Physicians elected Dr. Fred H. Albee of New York as President, Drs. Edward B. Heckel of Pittsburgh and John P. Lord of Omaha as Vice-Presidents, and Dr. Richard Kovacs of New York as Secretary.

Plans are being prepared for the next study trip, including the Central European countries: Germany, Austria, Czechoslovakia, Hungary and Italy.

ATLANTA IS ALL READY FOR S. M. A. CONVENTION

Final preparations have been made for the twentieth annual meeting of the Southern Medical Association to be held in Atlanta November 14 to 18. Indications are that a large delegation of West Virginia doctors will attend. There is a hard road direct from Charleston to the Georgia metropolis and many will drive. The route lies through Beckley, Bluefield, Bristol, Va.-Tenn., and thence southward on the Lakes-to-Gulf highway. One of the publicity articles sent from the Atlanta convention bureau reads in part as follows:

"The visiting physicians and their families, who come to Atlanta for perhaps the forty-fifth time when attending the Southern Medical Convention on November 14 to 18, will wish to learn something of the history of the city in order to appreciate the points of interest when they view them.

"Atlanta is full of historical sites. There are some landmarks that are older than those in Birmingham, Ala., for instance, and many of our downtown office buildings antedate similar structures in Miami. In fact, many persons now living remember the first houses set up after the burning of Atlanta in 1864.

"One of the oldest historical sites around Atlanta is Stone Mountain. Will Rogers, in an address here a few months ago, said that this single piece of stone was the rock that California threw at Florida in the recent controversy, but she missed her aim, and that is how it landed in Georgia. There are some people who do not believe this story, but it is no matter how it got here. Georgia is very glad to have it, and we all think it is a fine rock. In fact, there being no proof to the contrary, it is the biggest rock in the world!

"It is seven miles around the bottom and a mile to the top if you go up the sloping side. On its northern side Stone Mountain drops a sheer, perpendicular precipice almost a thousand feet from summit to base. Across this mammoth background of granite is being carved the supreme monument of history in the memory of men and women who dared all, suffered all and sacrificed all for the Southern Confederacy.

"The plan provides for three main features: a panorama, the memorial hall and an amphitheater. The panorama, carved in full relief, will represent the Confederate armed forces mobilizing around their leaders and the design will sweep downward over the surface of the granite for a distance of 1,350 feet. The memorial hall will be situated in a grotto made by tunneling into the base of the great stone and here will be gathered for perpetual safe-keeping the records and relics of the Confederacy. The amphitheater, a beautiful and pretentious concept, will have a huge stage and pipe organ at the foot of the mountain. A lake, which will reflect the carved surface of the mountain, will separate the stage from the audience seats and the mountain itself will form a sounding board capable of throwing a singer's voice for the distance of one mile where it may still be heard clearly.

"It is said that the central group alone, of the great panorama, will form the most colossal monument in the world when completed, surpassing in size the Colossus of Rhodes and the great Sphinx of Egypt. The figures are all mounted and the carving of General Lee will be approximately 165 feet high from the crown of his hat to his horse's hoofs, or almost as high as a fifteen-story office building.

"Of course, everyone heard about the fight at the mountain over who was to do the carving. That is all settled, and the only drawback was a "Whoa!" to the horses. Now they will all be standing still instead of moving over the face of the precipice as the first artist planned them.

"Another thing of great interest in Atlanta is her institutions of learning. One of the most prominent of these is the Federal Penitentiary, where, it is said, some of our most outstanding men in public life have learned a lot. It has helped Atlanta a great deal in earning her title of the "Convention City," one being held at this institution practically the year round.

"One of the first conventions ever held in the city was on a hot July day in 1864 when the Union Army of Tennessee, after the Con-

federate evacuation, marched into town over the spot now occupied by the City Auditorium. This auditorium seats 6,000 persons, but we did not seat them in those days. They just came in and sat down wherever it was convenient. General Sherman, in the absence of his hosts, sat himself down at 176 Cleburne Avenue, and it was under the trees still standing on this lot that General Sherman and General McPherson were conversing, on July 22, 1864, when the city heard the first gun in the Battle of Atlanta. General McPherson was mortally wounded a few hours later. Many mementoes of that convention still remain.

"One of these is the old lamp post at the corner of Whitehall and Alabama Streets, in the busiest section of the city. At its base there is a jagged hole put there by a shell from one of Sherman's guns. The shell struck the lamp post and exploded a few feet away, killing a man and a young woman. A metal plate attached to the post serves to strengthen it and informs the passerby of its history.

"Fort Walker in Grant Park, was a part of the breastworks in the Battle of Atlanta. The name was given to this fort in honor of General W. H. T. Walker, who lost his life in the battle about a half mile from the spot where the fort is located."

For hotel accommodations, write Dr. M. C. Pruitt, 421 Wynne-Clayton building, Atlanta, Ga.

STATE DENTAL SOCIETY ISSUES FIRST BULLETIN

The first number of The Bulletin of the West Virginia State Dental society has been received. It consists of 12 pages of printed matter and cover and contains a lead article by Dr. N. P. MacDermid of Charleston, state president; another on legislative needs of the society and a large number of small items relating activities of the members. There are four pages of advertising.

The Bulletin is the pet project of Dr. F. M. Farnsworth of Buckhannon, secretary. It is to be published three times a year.

Dr. MacDermid's article calls upon all ethical dentists of the state to join the state society.

"One discouraging feature," he says, "is that only about one-half of the registered dentists of West Virginia are members of our society. This is due, in part, to the careless, disinterested attitude on the part of some, but, up to the present time, chiefly to the natural handicap of lack of easy transportation from one part of the state to another. But with our present network of good roads throughout our state this can no longer be an excuse for non-attendance at our annual meetings or non-membership in our state society."

The Bulletin also sets forth that its legislative committee has had several conferences with the state code commission relative to changes in the law relating to the practice of dentistry. The dentists, it seems, are not eligible for reciprocity because of the lack of required preliminary education. The state society hopes to elevate the standards accordingly.

STATE PUBLIC HEALTH ASSOCIATION IS FORMED

Organization of the West Virginia State Public Health Association with 55 of the 94 health units under jurisdiction of the state department of health as the neucleus was affected in Charleston, October 4. Temporary officers are Dr. David Littlejohn as president and Miss Eugenia Whitehurst of the state health department as secretary. A permanent organization will be elected as soon as a charter can be obtained from the secretary of state, it was announced. This likely will be at the annual conference of county health officers to be held in Morgantown November 23-24.

It is understood that application of the new organization for membership in the American Public Health Association has been made. Dr. W. T. Henshaw, state health commissioner, has been designated West Virginia member of the board of governors of the national organization.

The meeting was attended by approximately 40 persons. The new association is to immediately inaugurate an educational campaign to have all county courts adopt the full-time health unit plan, now effective in some 15 counties.

THE TREATMENT OF ROENTGEN-RAY NAILS

CURRAN POPE, M. D.
Louisville, Ky.

Many roentgen-ray operators suffer from roentgenographers' nails. These usually present a trophic appearance; they are rough, ridged and dirty. The literature to which I have access does not consider their treatment. The method here described has given me excellent results. It requires patience and perseverance. The hands and nails are cleansed with a soft brush and good soap. The hands are bathed in very hot water, then immersed for a few seonds in very cold water, and rubbed dry with a crash towel. The entire hand is anointed with olive oil and the oil is worked into the nails, especially their corners and edges, by means of an orangewood stick. This had best be done in the evening, the surplus oil left on the fingers, and a pair of gloves worn during the night. In the morning the hands should be again cleansed, rubbed with olive oil, and the oil wiped off with a towel. After this treatment has been followed for six or eight weeks, one should consult a good manicurist, explain the condition, and have the nails manicured with great care. The nails should be trimmed, prepared, and finally a glaze put on them. This fills the ridges, closes the pores, prevents them from cracking or breaking, gives a smooth and glistening appearance, and prevents the collection of dirt.

Among the physical measures that may be employed constantly is that of the alternation of hot and cold water, a sort of Scotch douche. This treatment will usually result in a presentable set of nails. Ordinary care and thorough attention given by the manicurist is all that is necessary to keep the nails in excellent condition.

Any one who has had roentgen-ray nails and has succeeded in getting the fingers and nails in good condition must continue to take care of them.—*The Journal, American Medical Association,* July 24, 1926.

KIWANIANS ENDORSE HEALTH EXAMINATIONS

West Virginia Kiwanis club members, in district session in Charleston September 28, endorsed the periodic examination of the apparently healthy and urged members of each club to do all in their power to forward the movement.

The resolution introduced at the district convention and endorsed by the Ohio County Medical Society at its meeting October 1 as a movement of widespread importance, reads:

"Whereas, Kiwanis has shown and advocates all uplift movements; and,

"Whereas, the American Medical Association, West Virginia State Medical Association, and the association of life insurance companies, are advocating the periodical examination for the apparently well for the purpose of preventing sickness and prolonging life and usefulness,

"Be it therefore resolved: That, the West Virginia District Kiwanis Club do support and endorse this movement and urge its clubs by its publicity and influence, to aid in the education of its members and the public to its best importance, and that each Kiwanian seriously study these conditions and apply them."

WERNINGER-LATHAM

The marriage of Miss Mary Rebecca Werninger, daughter of Mr. and Mrs. A. W. Werninger, and Dr. Claude Aubrey Latham of Huntington, has been announced. Bishop U. V. W. Darlington officiated. Mrs. Latham is a graduate of West Virginia university where she was a member of the Chi Omega sorority Dr. Latham is also a graduate of West Virginia and Jefferson Medical college. He is a member of Phi Sigma Kappa and Alpha Kappa Kappa fraternities. For two years he has been associated with Dr. J. H. Steenbergen of Huntington.

PUBLIC HEALTH NEWS NOTES

Trachoma Waning

The Public Health Service has announced that reports just received from the Health Organization of the League of Nations show an increase in the prevalence of trachoma in Russia and some of the other countries of Europe, but a decline in the United States, during 1925, as compared to the previous year.

Trachoma, it was explained at the Public Health Service, is a disease of the eye, the origin of which has not yet been discovered.

In the United States a total of 1,951 cases were reported by 26 States for 1925, as against 3,260 reported by 30 States in 1924. The most cases reported from one State were in Missouri with 446 for 1925, but in the preceding year Missouri reported 689 cases. Oklahoma, on the other hand, showed a large increase in cases reported with 330 for 1925 as against 41 for 1924. The greatest decline was in California, where only 216 cases were reported for 1925, as compared with 1,065 in 1924.

Regarding trachoma in the United States, the league's report stated that only new cases of the infection were reported "and represent only a small proportion of the existing cases." At the beginning of 1925, four trachoma hospitals were in operation in the following localities: Knoxville, Tenn.; Pikeville, Ky.; Russellville, Ark.; and Rolla, Mont. A fifth hospital was opened later, in Minnesota. During the year, 790 cases were admitted to these hospitals. In the dispensaries 4,217 old cases and 699 new cases were treated.

During the year, 545,472 alien passengers were inspected and 546 found to be suffering from trachoma. Of 854,915 alien seamen examined at different ports and places in the United States and in Canada, 106 trachoma carriers were discovered.

School of Psychiatry

The Federal Government's "school of psychiatry" conducted at St. Elizabeth's hospital the national institution for the insane under the supervision of the Department of the Interior, will open about October 1, it has been announced by Dr. Nolan D. C. Lewis, senior medical officer in charge of scientific educational work at the hospital.

A class in neuro-pathology has already been opened, Dr. Lewis stated, and it is being attended largely by medical officers from the Navy.

St. Elizabeth's hospital, according to the Department of the Interior, maintains a staff of three professors and their associates and assistants who offer instruction by lectures, clinics, demonstrations and seminars, in pathology, psychiatry, psychology and other subjects related to human mental functions.

Included in the educational program for the present school year will be a school for postgraduate medical students from among the officers in the Army and Navy who will receive instruction in pathology, psychiatry and psychology. A nurses' training school also will be maintained, giving work in theoretical and practical general nursing and in special psychiatric nursing.

Training in mental hygiene and social service instruction will include work in educational group, social and individual administration, childhood and adolescence, teaching and general welfare problems.

In addition to the actual educational work of the institution, the teaching staff will give instruction in general medicine, surgery, psychiatry, psychology and pathology in the medical schools of the District of Columbia, and will offer consultation to various government and civic institutions.

The hospital's scientific research division, it was stated, is conducting investigations at all seasons of the year. Results are reported at scientific meetings and published in numerous medical journals, books and monographs, appearing at various times in the year.

Among the fields in which researches are being conducted are: Psychiatry, including comparative psychiatry, descriptive psychiatry, interpretive psychiatry, epilepsy, constitutional psycopathy and functional mental disorders; neurology, including comparative neurology, experimental neurology and neuropathology; psychology, including

human behavior, psychometry and special psychology; pathology, including chemical pathology, clinical pathology and general pathology; bacteriology, immunology and hygiene.—*The United States Daily.*

NARCOTIC LAW SUPERVISED BY POLITICIANS, IS VIEW

(ILLINOIS MEDICAL JOURNAL)

Another cart is about to be hitched before the horse in the latest endeavor of the laity to dictate the practice of medicine. Aroused to hysteria by agitators shrieking against unfortunate narcotic addicts, the so-called public conscience is proposing to load the statute books with even more maudlin and vicious legislation. If the flamboyant Kindred bill goes through, the public welfare and the medical profession will find itself involved in another maze of political barbed wire fences, that will do nobody any good and everybody much harm.

That addicts of narcotics should receive all possible help to free them from their frightful slavery, no one denies. That such relief should come and can come, efficaciously, only from scientific sources, everyone should know.

To place restrictions about the dispensing of any of the elemental drugs needed in the preservation of life, and to have the levers controlling these restrictions in the hands of lay people or political appointees is one of the direst crimes committed in the name of civilization. Enforcement of the Volstead law falling in ruins in every community of the United States and enriching lawbreakers to the tune of millions at the expense of honest taxpayers, appears to lack the effect of a salutary example upon the proponents and crusaders for the Kindred bill (H. R. 9962).

Among other iniquitous items this bill provides that "the Government may take over any and all plants in the country for the manufacture of opium, coca leaves, cocaine, or any compound, manufacture, salt, derivative or preparation thereof;" and also "any synthetic substitute for them." Further, this taking over may be by condemnation or private sale, and the price "may be fixed by the Federal Narcotic Board."

This board, it is interesting to learn, will be composed of directors, to the number of five. That there may be no doubt whatsoever of their usefulness as a political asset to any ward boss or politician born with the palm open, these five directors will be "appointed by the president with the advice and consent of the Senate." To further enhance their political value, these jobs will be for life and the salaries $12,000 per annum. Now, of course, there is included the amending clause that the job can be retained for life "during good behavior," but no standard is set for what might constitute "good behavior," and the board and the new portfolio of administration, springing fullborn from the brain of the reformers, will come forth full panoplied with all sorts of experts, officials and managers who will conduct investigations and see to law enforcements. The healthy democratic stomachs of the citizenry of the United States are good and strong, but for any group of political fixers to attempt to jam a dose like this down the throats of the taxpayers in the face of the present expense, inefficiency and graft of the prohibition enforcement, would insult the digestive apparatus of both a hog and an ostrich. Truly the ways of the glutton are beyond the pale of common sense!

Placing the entire control of various powerful and vital drugs in the hands of this board and giving to this body the right to act as sole arbiter of the amounts of these necessary drugs to be used by the dental and medical professions means turning into the hands of the political bosses of the United States the vital statistics of this country.

General provisions as to registration, special taxes and licenses are similar to the Harrison law, but more drastic.

The profession is about to be handed, in the vernacular, more of the same of which already the profession has had more than enough.

Increased taxes levied to give political henchmen soft jobs with hard dollars a-plenty as the remuneration, therefore, are thumbscrews enough to place upon honest folk. But when, in addition to a fat slice of the public income, politics and those who serve them best by playing the courtesan

with democratic rights and ideals, are afforded opportunity to traffic with physical wellbeing of those who pay the taxes, it is time indeed that the worm turned.

If the Government would establish sanitariums for the cure of drug addicts and if it would turn these and the entire dispensing of narcotic drugs over to the medical profession, then the Government would be abuot its right and just business. "Render unto Caesar the things that are Ceaser's." Surely the dispensing and distribution of any medicament belongs to those who have the background of scientific knowledge and the skill of the medical profession. When the Government begins to practice medicine, when the Government begins to take the distribution of drugs and the diagnosis of conditions calling for medical skill, into the hands of lay people, even when backed up by the best bound statute books, then the Government is well on the way to make a monkey of itself and a corpse out of the nation.

What the Government needs is a good purge of those laws that pretend to do a lot of good where it isn't needed and which really work incalculable harm in a place where public outrage masquerades as public welfare. If this Kindred bill goes through, a place on that directorate will not only be far above rubies but in actual power over the health, wealth and welfare of this nation it will surpass the influence for destruction wielded by Rasputin, the black monk of Russia.

Federal procedure has made for itself a name for red-tape and quibbling. That bureaucracy at Washington keeps growing, both in size, extent and influence, until it is an octopus strangling progress. "Give a calf rope enough and he will hang himself" is the old saw. Well, perhaps. Encouraged by the money for political favorites that has been made out of the Volstead law, and the promise for even more fat political cream suggested by the Harrison law, behold foisted upon the people this insufferable Kindred bill.

Any physician who sits idle and watches this nefarious piece of legislation saddled upon the profession and the public is no better than a murderer or a member of the Spanish inquisition. Do not err by thinking that the bill lacks its sea legs. It has found them and is going strong. Now is the hour for every doctor worthy of his oath to get out and fight the bill.

Take the cart away from before the horse and put it where it belongs. If it is necessary for the doctors and dentists of this country to show the lawmakers how to practice medicine and dentistry, let this be done. But remember, the only way in which to disseminate this education, needed immeasurably, is by virtue of the ballot-box. Get the senators and representatives in the only place where they can be hurt—the vote of your community as shown in the election returns.

Find out today what these representatives of your neighborhood think about the Kindred bill and let them know what you are going to do if it is necessary to resort to the "big stick" to make them "listen to reason."

WHY HAVE PHYSICIANS GIVEN THEIR VALUABLE DISCOVERIES?

Why is it that Dr. Banting, when he finally succeeded in isolating the active principle of the internal secretion of the pancreas, did not erect a laboratory in a great city and demand $5,000 for individual treatments of cases of diabetes?

By the most conservative estimate at least one hundred thousand diabetics to whom life would be cheap at $5,000 would have raked and scraped together the needful and swarmed to him for succor. A five million dollar forture permitted to trickle purposely through his fingers—a Ford fortune given freely to the suffering world.

Why?

Galvan, who gave to the steel industry the first practical method of coating iron to make it rust-proof, called his discovery "galvanizing" and made a fortune. And Lee de Forrest, inventor of the radio tube that made home reception possible, is rich—no tubes are offered at free clinics to those suffering from the itch to hear XYZ jazz!

But the man who finally isolates the cancer germ, if it is a germ, will gleefully and

proudly broadcast his discovery to an anxious, waiting world, free, gratis and for nothing; because he will be, undoubtedly, a medical practitioner.

Why?

Why did Dr. Everett, a physician in a western village of eight thousand, publish at his own expense in his local newspaper, a full-page warning that hundreds of his townsmen were in danger of poison-ivy poisoning—that already he had served seven cases, and by investigation had found, that the woods where violet pickers spent their Sunday afternoons were overgrown with this noxious weed?

Why have physicians, from time immemorial, given freely to the world their valuable discoveries, while others, greedy for the dollars, made it pay through the nose?

Why do medical men favor prevention when they realize that every ounce of prevention they sponser means a dollar's worth of "cure" out of their pockets?

In no other business or profession can one be found to match the physician whose sole aim is to do his work so well that soon he will have no job; aye, even further, to prevent so well that there will be no jobs for him.

Medical Pocket Quarterly

ADRENALIN FOR PARAPHIMOSIS

Yogindra Deva, B.Sc., M.B., B.S., of Fyzabad, India, has been using adrenalin in cases of paraphimosis for the last two years, and it has never failed him. He first came to know the use of this drug in "Clinical Memoranda" by Brand and Keith. Theauthors of this book advise to wrap the end of the penis, including the strangulated band, with a compress of absorbent cotton-wool soaked in a mixture of equal parts of adrenalin chloride (0.1 per cent) and cocaine hydrochlorine (10 per cent). The compress is kept in place for about 15 minutes by a bandage with a moderate amount of compression. On removal of the compress the edema will be found to have completely disappeared and with a little traction the prepuce can be restored to its normal position. (*The Lancet*, May 1, 1926, p. 48.)

BIRTH ANNOUNCED

Cards have been received announcing the arrival of Ross Preston Daniel, Jr., son of Doctor and Mrs. Ross P. Daniel of Pemberton. Dr. Daniel is president of the Raleigh County Medical Society and one of the prominent members of the profession in southern West Virginia. His father and a brother are doctors; it is a foregone conclusion that Ross Preston Daniel, Jr., will be one, also.

IT IS GETTING TOUGHER EVERY DAY TO MAKE A LIVING

The medical profession is the only one where good and efficient work tends to reduce the prosperity of those in it. The plumber does a good job, but corrosion is his ally and soon he must come back to repair the pipe he installed last year. The lawyer wins the case, gets paid for writing up the agreement, and makes more work for himself by writiing it in such a way that, in case of dispute he alone can interpret what he has done.

But the good and worthy doctor cheats himself every time he does a good job. He improves the sanitary system of a town—and loses a few hundred potential typhoid cases. He discovers, as Pasteur did, the germ theory, and immediately reduces his number of future cases.

All of which is good, right and proper; and in perfect accord with the noble and high aims of the profession. But it is getting tougher and tougher every day to make a living, to say nothing of a competence in a field where good work cuts down the chances for future livelihood.—*Med. Pocket Quarterly.*

FLYING DOCTORS

Australia purposes to send its physicians by airplane to any part of the continent where they may be needed. The country has been mapped out in circular districts, each with a radius of 200 miles, to be covered by flying doctors. A physician located at Darwin has an airplane practice extending over an area ten times that of Great Britan.

SANATORIUM ERECTING TWO NEW BUILDINGS

Mt. Regis Sanatorium, Salem, Va., is erecting two new private cottages, which, when completed, will offer private accommodations for eight additional patients. They are of stucco construction trimmed in brick and will add to the attraction of the institution which will then consist of eight separate buildings.

These cottages will have every modern convenience, and are considered the last word in the cottage type of sanatorium construction. Every type of accommodation will then be available from the community porch plan or the private room and porch, to an entire private cottage with sitting room, dressing room, bath and sleeping porch.

Additional driveways and walks are to be completed and an effort will be made to further beautify the grounds.

DR. R. H. LEWELLYN WEDS

Cards have been received announcing the marriage on October 5 in Charleston of Miss Sylvia Mae Wendt, daughter of Mr. and Mrs. August Wendt of Cameron, to Dr. Raymond H. Lewellyn of Putney. Dr. Lewellyn is a son of the Rev. and Mrs. L. B. Lewellyn of Elm Grove. He attended West Virginia University and received his medical degree at New York University. Dr. Lewellyn served one year as interne at the Ohio Valley General Hospital, Wheeling, leaving there for Kanawha county in mid-summer. Mrs. Lewellyn is a graduate of the Ohio Valley General Hospital's training school for nurses and recently was head nurse in a Morgantown hospital.

"MAKING AMERICA SAFE FOR MOTHERS" ANOTHER MATERNITY ACT SLOGAN*

By WILLIAM C. WOODWARD, M. D.

Executive Secretary of the Bureau of Legal Medicine and Legislation of the A. M. A.

Chicago, Illinois

*This is the third of a series of articles showing the fallacies of the Sheppard-Towner or Maternity Act and giving reasons why Congress should NOT make further appropriations for its extension.

In the May issue of *Good Housekeeping* there appears an article by Miss Kathryn Glover under the title of "Making America Safe for Mothers."

Page 270—Miss Glover writes:

"The next most significant thing that has happened is a new attitude of interest on the part of the medical profession to the subject of maternal care, and an awakening to a new responsibility. A stirring of public interest and the stimulus of the splendid services of the group within the profession who have specialized in modern obstetrics have brought this about. A joint committee representing the American Association of Obstetricians and Gynecologists, and Abdominal Surgeons and the American Gynecological Society have organized to promote a nation-wide campaign for better maternity conditions. This committee goes on record as throwing the responsibility for better maternity conditions upon the medical profession and is making an effort to have a maternal welfare program given before every county and district medical society in each state in the Union. One cannot say that before the Sheppard-Towner bill began to weave its story into the lives of women this could not have happened, and that this light breaking within the medical profession is one of the significant chapters in the unfolding story."

Maternal mortality was attracting the attention of the medical profession long before the passage of the Sheppard-Towner Act. As far back as 1917, the Children's Bureau itself published a bulletin on the subject, by Dr. Grace L. Meigs, Miscellaneous Series No. 6, Bureau Publication No. 19. Reference to that article will show that it was subject of discussion by the medical profession. The interest of the profession in it was increasing up to the time of the passage of the act, and would have continued to increase whether the

act had been passed or not. Miss Glover fails to state, however, that anything that has been done under the Sheppard-Towner Act has decreased infant mortality. Infant mortality in the birth registration area in 1922, the first calendar covered by the act, was 6.6, and two years later in 1924 it remained the same. If proponents of the Sheppard-Towner plan would take credit for reductions in maternal mortality since the passage of the act, they must also assume blame for increases in Sheppard-Towner states between 1922 and 1924 as follows:

Page 273—Miss Glover writes:

> "The Sheppard-Towner Act, though functioning administratively through the Children's Bureau, leaves each state free to map out its own plan."

What Miss Glover has written is true. In fairness, however, she could have added that the Sheppard-Towner Act likewise leaves the Federal Board of Maternity and Infant Hygiene free; it leaves that board free to say whether the plan mapped out by the state is or is not acceptable to the Federal Board and to deny aid if it is inacceptable.

Page 273—Miss Glover writes:

> "Evidence of what New York State is doing is evidenced by the fact that in 1916, 16 per cent of all births were reported by midwives, whereas in 1924 only 8 per cent were reported."

Why should Miss Glover hark back to figures for 1916? when the Sheppard-Towner Act was not passed until 1921? As a matter of fact, an energetic and intelligent campaign was carried on in New York City, and probably in other cities of New York State, long before the Sheppard-Towner Act was dreamed of. Does not Miss Glover imply that the Sheppard-Towner Act is responsible for the reduction she refers to when that cannot possibly be the case? Moreover, if she believes that the reduction in the number of cases of childbirth attended by midwives was a good thing, why does she not explain how it happens that in 1916, when 16 per cent of all births were reported by midwives, maternal mortality in New York State was 5.4, whereas in 1924, when only 8 per cent were so reported, maternal mortality was 5.9, and that in the interval it had ranged even as high as 8.0?

Page 274—Miss Glover writes:

> "Idaho, making a study of 100 cases of mothers who died in child-birth, found that 45—nearly half—received no medical care or had a doctor only on the day of the death * * * *."
>
> "In such states as North and South Dakota many women are forty miles or more from the nearest physician who, always with a large territory to cover, may be sixty or eighty miles away at the time that he is needed. * * * *"

Page 280—Miss Glover intimates that it is desirable that puerperal septicemia be made a reportable disease and writes:

> "Sixteen states in all have a statute or regulation on their books, but it has been practically a dead letter law, for in only one state—Mississippi—do the cases reported exceed the number of deaths from that cause."

It seems rather unfortunate that Mississippi should have been cited as a banner state with respect to this matter, for in Mississippi maternal mortality which in 1922, the first full calendar year, when the Sheppard-Towner Act was in force, was 8.3, had risen in 1924 to 9.5.

Pages 270-273—Miss Glover writes:

> "In time, in this country, if we follow the trails which are opening, we shall develop an equality of natal and prenatal care which approaches that existing in Sweden and Norway, where the hazards of child-birth have been reduced almost to a minimum."

Unfortunately, Miss Glover does not state the nature of the natal and prenatal care which she presumes have in Sweden and Norway produced the low maternal and infant death rates attributed to those matters. There is a strong suspicion that such low death rates may be based rather on methods of computing death rates than on any actual differences in mortality, and that possibly racial traits and climate may have something to do with the matter.

These memoranda concerning Miss Glover's article seem to be sufficient to show that it cannot be accepted as sufficiently sound from the standpoint of fact to justify the prolongation of the life of the Sheppard-Towner Act.

The West Virginia Medical Journal

Directed and Edited by the Committee on Publication

[The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible]

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS:

WALTER E. VEST, Huntington — HARRY M. HALL, Wheeling — J. HOWARD ANDERSON, Marytown — C. W. WADDELL, Fairmont

MR. S. O. NEALE, *Secretary-Business Manager*, Charleston

Entered as Second Class Matter, January 1, 1926, at the Postoffice at Charleston, West Virginia

Volume XXII DECEMBER : 1926 *Number 12*

THE TREATMENT OF VOMITING OF PREGNANCY *

By PAUL TITUS, M. D.
Pittsburgh, Pa.

[EDITOR'S NOTE:—*This article was received for publication May* 26, 1926.]

NAUSEA and vomiting of early pregnancy are such a common occurrence that a fairly busy practitioner is almost constantly consulted by patients with this complaint. If the trouble is so mild that the patient speaks of it merely as "morning sickness," there is a tendency to be very complacent with her about it and to assure her that it is a customary thing, to be borne until it wears itself out. Oftentimes, however, this mild disturbance graduates abruptly and with little warning into the more severe stages of hyperemesis, where the patient is not only wretched but even gravely ill.

In this discussion of the treatment of nausea and vomiting due to pregnancy I wish to preface my remarks with what may seem a radical statement. It is my firm conviction that there are only rare cases of vomiting of pregnancy which cannot be promptly relieved regardless of how seriously ill the patient may be. By this, I mean even though she be emaciated, dehydrated and acidotic, with even the jaundice and nephritis of a severe toxicosis. Moreover, I consider that the treatment is a failure if the patient is not entirely relieved and eating a general diet within one week.

The ordinary "morning sickness" is almost totally unnecessary and easily checked if given any serious attention by the patient and her doctor. That it should be stopped is obvious because of the possible danger lurking in its neglect. For the patient to be given relief from the miserable existence which is punctuated by the retching and gagging of nausea, the drooling salivation, and the attacks of vomiting at most inopportune times,

* Read before the fifty-ninth annual session of the West Virginia Medical Association, May 26, 1926, Morgantown, W. Va.

brings gratitude and satisfaction beyond description.

Briefly and simply expressed, both the prevention and the treatment of vomiting of pregnancy consists in the use of frequent meals or doses of carbohydrate foods in the milder cases supplemented or modified in the more serious cases by repeated intravenous injections of glucose in hypertonic solution.

Research work which I will not attempt to review here except by an appended bibliography (1, 2, 3, 4, 5, 6), warrants the opinion that a carbohydrate deficiency in the maternal metabolism must exist before a so-called toxemia can develop. That is to say, we may even admit the possibility of a specific toxin evolved during every pregnancy, but the patient resists its ill effects unless her glycogen stores are either low originally or become depleted. A specific toxin is not essential to our theory, however, because glycogen starvation plus dehydration (which latter Harding (7) now considers the more important factor) closely simulates a toxemia of early pregnancy in many characteristics, even to the pathological necrosis of the liver in fatal cases.

A carbohydrate deficiency during pregnancy is undoubtedly of two-fold origin (1) a relative deficiency due to an unexpected demand on the part of the fetus and the enlarging uterus and (2) an actual deficiency, augmented by nausea, from low carbohydrate food intake. "This double source of deficiency in carbohydrates, namely, lowered intake with extra fetal consumption, is peculiar to pregnancy and may be considered as an actual starvation. There is no intention of asserting that pregnancy toxemia and starvation are identical, for additional factors undoubtedly are involved. The contention is that every pregnant woman is a potential subject for toxemia, and deficiency or starvation of carbohydrates permits this to develop precisely as the starved dog may be poisoned more easily than the well fed one." (3).

These, then, are the main factors which have influenced my work on this subject, and I have purposely discussed them very briefly in order particularly to present more regarding the details of the systematic management of these cases.

For the purpose of study and treatment of these patients it is convenient to divide them into three groups according to the severity of their symptoms:

I. Those who are nauseated and vomit a few times a day or the "mild" cases.

II. Those whose vomiting is so persistent that they are miserable and sick most of their waking hours, but still able to "drag around," or the "moderately severe" cases.

III. The true cases of pernicious vomiting, where not even water is being retained, acidosis is developing, with emaciation, often jaundice with fever, and albumin, acetone, and casts in the urine.

TABLE I
VOMITING OF PREGNANCY
TABLE OF CASES

	Rep'd 1920	Rep'd 1922	Rep'd 1925	Pres. Rep. to Jan. 1926	Tot.
Group I: (Mild)	32	30	129	27	218
Group II: (Moderately severe)	29	27	32	8	96
Group III: (Serious or "pernicious")	15	11	23	6	55
	76	68	184	41	369

Group I patients are treated by being given certain directions to follow out at home. The principle on which these are based is that the patient should increase her carbohydrates and decrease her proteins, and also that she should eat frequently in order to avoid any peaks and valleys of food intake. Specific instructions should be given as to when and what to eat, and from the moment the patient awakens in the morning until she goes to bed at night she should have small amounts of foods high in carbohydrates every two to two and one-half hours. Such a diet list is easily arranged, and it is usual to supplement it by a formula for lactose or dextrose, and soda (ten and two per cent respectively) in solution which the patient can prepare at home. (Milk sugar 1½ ozs., bicarbonate of soda, 2½ teaspoonfuls, water 1 pint. Direct: Two ounces every two hours with chipped ice.)

TABLE II

Analysis of Group I

(Mild Vomiting of Pregnancy)

Treated at home by regulation of diet.

(a) Previously reported; total to Jan. 1925	191
(b) Present report; Jan. 1925 to Jan. 1926	27
Total	218

Relieved within 7 days	(a) 151 (79%) (b) 23	**174 or 79.8%**
Relief from 7 to 14 days	(a) 26 (13%) (b) 2	28 or **12.7%**
Improved slowly (Partial failure)	(a) 14 (7%) (b) 2	16 or **7.3%**
No improvement (Failure)		0

"Relieved" indicates not only cessation of vomiting, but return to "soft" or "general" diet, and patient ready for discharge.

Group II belong in the hospital because an essential part of their treatment is isolation from relatives and friends. Moreover the general management of these cases is as important as the therapeutic treatment.

In order to simplify the treatment I have worked out a general form which has been mimeographed and is attached to the patient's chart. This avoids constant repetition of detailed orders, and is presented herewith:

OUTLINE OF TREATMENT FOR NAUSEA AND VOMITING OF PREGNANCY

GENERAL DIRECTIONS

1. Patient should be isolated from visitors, and the best and most rapid results are obtained if she is sent to the hospital The husband may be permitted (not oftener than once daily) to make short visits, but no one else of family or friends is to be admitted except by special arrangement with the doctor.

2. Patient should be absolutely at rest in bed until four or five days after vomiting has entirely subsided.

3. At 8:30 a. m. and 8:30 p. m. daily, an enema is to be given, unless bowels have moved freely shortly before. This is to be followed by the injection into the rectum of a solution containing sodium bromide grs. xxx, chloral hydrate grs. x in one-half to one ounce of warm water (starch water if bowel is irritable). As patient begins to improve omit the evening dose of these sedatives first, and presently stop the morning dose.

4. As soon as nausea and vomiting have subsided sufficiently that it may be retained, a cathartic dose of milk of magnesia should be given every day or two at bed-time.

5. Gastric lavage should be employed from one to three times daily if vomiting persists in spite of the period of rest when no food or water is being taken by mouth. Magnesium sulphate (1½ ozs.) should be introduced through the tube once daily at the end of a lavage. Drinking one or two glassfuls of warm sodium bicarbonate solution is a poor but useful substitute for the stomach tube.

6. Glucose, or lactose, (10%) and sodium bicarbonate (2%) solution is to be given by enteroclysis as continuously as can be tolerated. The "tidal stand" method of Harris is preferred to the "Murphy drip" but the latter may be used.

7. Intravenous injections of glucose solution should be begun promptly if vomiting is excessive, or does not cease immediately with the simple measures of diet restriction and rest. These injections should be given from one to four times daily depending on indications and response to treatment. The usual mistake is to give too few injections of too weak solution. The therapeutic dose of glucose is 50 grams in 200 cc. of distilled water (25 per cent). Continue injections until patient is relieved of vomiting and taking food freely.

Ampoules of sterile glucose solution for intravaneous injection may be purchased through pharmacists or it may be prepared in any well-equipped laboratory.

For detailed directions see the following reference: Titus, Paul: Hyperemesis Gravidarum; Treatment by Intravenous Injections of Glucose, and Carbohydrate Feedings, Journal of the Amer. Med. Assoc, Aug. 15, 1925, Vol. 85, pp. 488-493.

Strong hypertonic solution (25%) of glucose is best for intravenous injection. If more water is needed to combat dehydration, five to ten per cent sterile glucose solution may be injected under the breasts and into the axillae. This is preferable to salt solution as the latter may be toxic in these cases. From one to three thousand cc. may be given over a period of several hours' time. There is danger of slough or abscess formation if any solution is given by this method either too rapidly, too frequently, or not carefully sterilized.

Submammary infusion is not a substitute for intravenous injection of glucose solution.

8. Frequent feedings are essential after the initial period of rest, and carbohydrates should predominate. The amount and kinds of food should be increased slowly but steadily as outlined in diet list below: Nourishment should commence at 7 a. m., or even sooner if patient is awake.

9. In order to determine exactly when acetone and diacetic acid disappear from the urine, each specimen voided is to be sent separately to the laboratory. Each specimen, therefore, is to be measured, the amount voided and time recorded on chart, the specimen bottle marked in the usual way with the addition of the time voided, and sent immediately to the laboratory. Night specimens are to be kept on ice until

morning. Request general analysis with special attention to acetone and diacetic acid.

10. A specimen of blood is to be taken by the interne as soon as practicable after admission, for estimation of blood sugar and blood alkali reserve. To be repeated each morning before the first intravenous injection of the day, until patient shows

DIET LIST AND REGIMEN

First six to twelve hours: Nothing by mouth. Quench thirst by wetting lips with water, orange juice with or without glycerine, and by enteroclysis.

Second twelve hours: Water in half ounce doses every fifteen minutes. Patient should be awakened for this dosage night or day (second twelve hours only). Continue enteroclysis of glucose and soda solution.

Second twenty-four hours:

7 a. m.—Hot tea with sugar and lemon (2 ozs.)

8 a. m.—Glucose (10%) and soda bicarb. (2%) solution (2 ozs.)

9 a. m.—Orange albumin with chipped ice (2 ozs.)

10 a. m.—Glucose and soda solution with chipped ice (2 ozs.)

11 a. m.—Orange or pear juice albumin, chipped ice (2 ozs.)

12 m.—Glucose and soda solution, chipped ice (2 ozs.)

1 p. m.—Hot tea with sugar and lemon (2 ozs.)

2 p. m.—Glucose and soda solution, chipped ice (2 ozs.)

Continue thus at hourly intervals throughout the day, alternating any of these liquids with glucose, or lactose, and soda solution until asleep at night. Water should be taken in one or two ounce doses between feedings. During the day and up to 9 p. m. patient should be awakened punctually for this dosage.

Continue enteroclysis.

Third twenty-four hours: Same as second but doubled in amounts if nausea is merely lessened. If nausea and vomiting have practically ceased, and nourishment of second 24 hours is being retained, give:

7 a. m.—Hot tea (2 to 3 ozs.) with sugar and lemon; piece of twice toasted stale bread.

8 a. m.—Glucose and soda solution (2 ozs.) with orange or lemon juice if desired, and served with chipped ice.

9 a. m.—Hot cream of wheat gruel (2 to 3 ozs.) with sugar but no cream or milk.

10 a. m.—Glucose and soda solution (2 ozs.), chipped ice.

11 a. m.—Orange or other fruit juice in albumin water with chipped ice (2 ozs.)

12 m.—Clear broth, or cream of pea, celery, potato, or bean soup (2ozs .) with one unsalted cracker.

1 p. m.—Glucose and soda solution (2 ozs.), chipped ice.

2 p. m.—Orange, or pear, or pineapple juice in albumin water with chipped ice (2 ozs.)

3 p. m.—Glucose and soda solution (2 ozs.) with chipped ice.

4 p. m.—Hot tea (1 teacupful) with sugar and lemon, and thin bread and butter sandwich (piece of lettuce if desired).

5 p. m.—Glucose and soda solution (2 ozs.) with chipped ice.

6 p. m.—Cream, or vegetable soup (without onion or cabbage) (2 ozs.) with one or two unsalted crackers.

7 p. m.—Glucose and soda solution (2 ozs.) with chipped ice.

8 p. m.—Fruit juice, or fruit juice with albumin water (2 ozs.) with chipped ice.

9 p. m.—Glucose and soda solution (2 ozs.) with chipped ice.

10 p. m.—Hot malted milk (made with water instead of milk), or hot clear broth (2 ozs.), with one unsalted cracker. Similar nourishment if awake during night. Water between feedings as possible. Continue enteroclysis.

Fourth twenty-four hours:

7 a. m.—Cream of wheat gruel with cream and sugar (small portion), tea, or coffee, or cocoa with cream and sugar (2 to 4 ozs.), one piece dry toast.

8:30 a. m.—Glucose and soda solution (2 ozs.) with chipped ice.

10 a. m.—Clear broth and crackers.

12 m.—Cream soup (2 to 4 ozs.), crackers or toast, cornstarch pudding or "floating island" pudding or vanilla ice cream (1 to 3 ozs.)

1:30 p. m.—Glucose and soda solution (2 ozs.) with chipped ice.

3 p. m.—Orangeade, or other fruit juice with water and sugar (3 ozs.) with chipped ice.

4 p. m.—Hot tea (one teacupful) with sugar and lemon, with thin bread and butter or lettuce sandwich, or "lady finger," or one crisp sugar cookie, or small piece "angel's food" cake.

6 p. m.—Cream soup or broth, with crackers or toast, small piece well baker potato, pear-juice or other fruit ice, or other dessert as at noon, tea with lemon and sugar as desired.

8 p. m.—Glucose and soda solution (2 ozs.) with chipped ice.

9:30 p. m.—Hot malted milk, or clear broth with cracker. Continue enteroclysis. Consider discontinuing evening dose of chloral and bromide.

Fifty twenty-four hours:

7 a. m. **Breakfast**—Orange juice, or half an orange with sugar, small portion any cereal, except oatmeal, with cream and sugar, toast with honey or maple sugar, tea or coffee or cocoa with cream (or not, as desired) and sugar.

10 a. m.—Clear broth and crackers.

12:30 p. m. **Lunch**—Creamed carrots or corn or spinach, small piece baked potato (white or sweet); coddled or poached egg, toast or crackers, honey, raisins or dates, stewed fruit (except apricots or plums), or baked apple (hot), tapioca or rice or cornstarch pudding, or ice cream, tea with sugar.

3:30 p. .m—Hot tea with lemon and sugar, lettuce sandwich, or cinnamon toast or small piece sponge-cake.

6 p. m. **Dinner**—Cream soup or broth, crackers, sweetbread on toast, or lamb chop, or chicken, or squab, baked potato, carrots, or spinach or peas; desserts as at lunch, tea or cocoa with sugar.

9 p. m.—Hot malted milk, or broth, and crackers.

Clear candy (butter-scotch or caramels) may be eaten at dessert-time, or between meals if hungry.

Night dose of bromides and chloral discontinued by or before this time.

Sixth twenty-four hours: General diet selected along lines similar to above, catering to patient's desires when not too bizarre, and giving nourishment every two to three hours. Never allow patient to become hungry.

Seventh twenty-four hours: As sixth. Allow up in chair for hour or two if well. Discontinue all bromides and chloral.

[NOTE.—From second day on, exceptions to above diet may be made as patient expresses a desire for any particular articles of food, if not unreasonable. This may be given once or even twice in a day to stimulate desire for food. For example, a patient may ask for a hard cracker or water-biscuit to chew, or a little caviar, or a piece of steak (which latter may be chewed but not swallowed before the fourth day), or a piece of celery. Because chewing stimulates salivation and thus digestion, this is to be encouraged.

Progress faster than outlined as expected by diet list may warrant advancing the day's allowance of food after the first couple of days. At the first, however, it is advisable to advance slowly until the patient begins to complain of a little hunger or to express a desire for food.

Relapses may occur in the first day or two, but after a short period of rest, the treatment and dietetic regimen should go forward steadily. If patient vomits once or twice during the first twenty-four to forty-eight hours, do not stop the treatment to start over again, but push on, after washing out the stomach, as though nothing had happened.

Glucose and soda by mouth as well as large amounts of sweets occasionally nauseate after a few days. In such case they may be temporarily omitted, depending on starches for the necessary carbohydrate, and adding proteins (chops, chicken, or steak), to chew and eat for variety and appetite.

Do not let the patient decide because she may "have no appetite" or "is not hungry" that she will not eat at a stipulated meal-time. At least small amounts of nourishment must be taken at each designated time regardless of any lack of desire for food. Foods which are actively nauseating to a patient are to be avoided, however, even though included in the above list. Milk and milk preparations usually are not well tolerated by these patients.]

TABLE III

Analysis of Group II.

(Moderately severe vomiting of pregnancy)

Treated in hospital by isolation, regulation of diet, and as required intravenous injections of glucose (dextrose) solution.

(a) Previously reported; total to Jan. 1925	88
(b) Present report; Jan. 1925 to Jan. 1926	8
Total	96

Relieved within 7 days	(a) 75 (85%) (b) 5	80 or 83.3%
Relief from 7 to 14 days	(a) 11 (12.5%) (b) 3 (two relapsed)	14 or 14.5%
Improved slowly (Partial failure)	(a) 2 (2.2%.) (b) 1 (relapsed; total time in hospital 21 days)	3 or 3.1%
No improvement (Failure)		0

"Relieved" indicates not only cessation of vomiting, but return to "soft" or "general" diet, and patient ready for discharge.

The treatment of the patients in Group III who are usually desperately ill is an elaboration of that for Group II. They are in immediate need of more frequent intravenous injections of glucose solution, and these may be given from one to three or more times daily. I prefer repeated injections given frequently to the single continuous flow over long periods of time. This has been recommended but in the single injections there is less likelihood of displacing the needle with flow of the solution into the tissues, of thrombosis and other complications to say nothing of the difficulty in keeping a patient absolutely immovable for hours at a time.

Details of the preparation and dosage of glucose for intravenous administration have been published but are briefly as follows: the glucose must be chemically pure, dissolved in distilled water, filtered and sterilized without caramelization in an autoclave. The average single dose for an adult is 50 grams of glucose and it is advisable to give it in hypertonic solution (preferably 25 per cent and if more dilution is desired not less than 10 per cent). It should be injected slowly and be hot. If these points are carefully observed reactions will not occur except in the rarest of instances.

Several pharmaceutical firms now have ampules of glucose solution on sale in the open market, and except for those which contain fairly large amounts of cresol or other preservatives, or those which may accidentally become cloudy or brown, these are convenient and satisfactory.

TABLE IV

Analysis of Group III

(Serious or "pernicious" vomiting of pergnancy)

Treated in hospital by isolation, intravenous injections of glucose (dextrose) solution, proctoclysis and hypodermoclysis of fluids, and with a regulated diet.

(a) Previously reported; total to Jan. 1925	49
(b) Present report; Jan. 1925 to Jan. 1926	6
Total	55

Relieved within 7 days	(a) 40 (82%) (b) 3	43 or 78.2%
Relief from 7 to 14 days	(a) 4 (8%) (b) 2	6 or 10.9%
Improved slowly (Partial failure)	(a) 1 (2%) (b) 0	1 or 1.8%
No improvement (Failure and therapeutic abortion)	(a) 4 (8%) (b) 1	5 or 8.8%
Deaths ("No improvement" group of 5 cases)	(a) 3 (6.1%.) (b) 1	4 or 7.2%

Three of the patients who died were clinically cases of acute yellow atrophy of the liver (sudden onset with projectile vomiting, convulsions although early in pregnancy, marked jaundice, albuminuria with casts; two having rapidly fatal outcome) but these cases have been included in this series in order to avoid "correction of statistical figures." One of these three lived 27 days, being kept alive by constantly repeated intravenous injections of hypertonic glucose solution, relapsing into coma and tetany whenever these were stopped for longer than eighteen hours (10 to 12 weeks pregnant, onset sudden with vomiting and convulsions). The fourth was an early case in this series; while the fifth patient recovered but was partially paralyzed for months from multiple neuritis. She went through a subsequent pregnancy successfully, falling this time into Group I (mild vomiting) quickly relieved by treatment.

"Relieved" indicates not only cessation of vomiting, but return to "soft" or "general" diet, and patient ready for discharge.

("Corrected" mortality ..... 1.8%)

About two years ago Thalhimer of Milwaukee suggested that the addition of insulin to intravenous injections of glucose would favor utilization in non-diabetic acidosis because such treatment was successful in diabetic acidosis and coma.

As a matter of fact, insulin probably favors the utilization of sugar in diabetics by "combustion," and insulin is necessary to a diabetic because he fails to produce his own. The sugar is injected here solely for the purpose of protecting against possible overdosage of insulin.

In the non-diabetic acidosis sugar in the form of body glycogen is lacking and storage rather than combustion of the injected sugar is the desired effect. It is illogical to inject glucose only to burn it up by the addition of insulin, and with the lowered blood sugar reading in the majority of these cases it may be even dangerous to inject insulin.

I believe that the good results which have been reported following this combined treatment are due to the fact that the injections supply water to the patient, and that not enough insulin was added to burn up more than part of the glucose injected. The beneficial effects might readily be due to the persisting excess of sugar and in spite of the insulin.

The possible value of corpus luteum extract is always discussed in connection with the treatment of hyperemesis gravidarum. Everyone seems to have tried it, but at present no one seems to have much faith in its value. The results are so variable that it must be classed as an undependable therapeutic measure.

It is seldom that an abortion is necessary even in these desperately sick patients but one must not wait too long in those who do require it lest even that be undertaken too late to save the patient's life.

Dehydration, liver destruction, and acidosis are the factors which must be actively combatted in these cases, and glucose and water injected into the vein offer the most consistent and best method of doing this, until the patient is again able to take and retain food and water by mouth.

SUMMARY

Under appropriate treatment there are only rare cases of vomiting of pregnancy which cannot be promptly relieved, no matter how seriously ill the patient may be; while ordinary "morning sickness" is almost totally unnecessary.

Present day treatment is based on the premise that the disturbance in carbohydrate metabolism common to pregnancy underlies

and initiates this condition.

A detailed outline of the dietetic and therapeutic regime for the treatment of hyperemesis gravidarum is presented. This includes the author's method of treatment by intravenous injections of glucose solution with a brief outline of the technic of preparation, administration, and dosage of glucose.

A series of 368 cases (328 previously reported with 40 additional cases) is analysed in respect to type of cases and results of treatment.

BIBLIOGRAPHY

1. Titus, Paul; Hoffman, G. L., and Givens, M. H.: The Role of Carbohydrates in the Treatment of Toxemias of Early Pregnancy, J. A. M. A. 74:777 (March 20) 1920.

2. Titus, Paul; and Givens, M. H.: Intravenous Injections of Glucose in Toxemia of Pregnancy, J. A. M. A. 78:92 (Jan. 14) 1922.

3. Titus, Paul: Hyperemesis Gravidarum; Treatment by Intravenous Injections of Glucose, and Carbohydrate Feedings, J. A. M. A. 85:488 (Aug. 15) 1925.

4. Duncan, J. W., and Harding, V. J.: A Report on the Effect of High Carbohydrate Feeding in the Nausea and Vomiting of Pregnancy, Canad. M. A. J. 7:1057 (Dec.) 1918.

5. Harding, V. J.: Nausea and Vomiting in Pregnancy, The Lancet, 2:327 (Aug. 13) 1921.

6. Harding, V. J., and Watson, B. F.: Carbohydrates in the Nausea and Vomiting of Pregnancy, The Lancet, 2:649 (Sept. 23) 1922.

7. Harding, V. J., and Van Wyck, H. B.: The Use of Fluids in the Treatment of Hyperemesis Gravidarum, Am. J. Obst. and Gyn., 11:1 (Jan.) 1926.

8. Thalhimer, William: Insulin Treatment of the Toxemic Vomiting of Pregnancy, Surg., Gyn., and Obst., 39:237 (Aug.) 1924.

THE MANAGEMENT OF LABOR *

By P. BROOKE BLAND, M. D.
Philadelphia, Pa.

THE topic of this paper embraces one of the finest functions allocated to man and most of the important features of obstetrics as well. At the beginning it is important to preface my remarks by stressing the fact that the management of labor is the management of the prospective mother from the beginning of her pregnancy to the completion of all its correlated phenomena, which end only in full involution.

It is thus observed that the term management does not refer alone to the intra-partum care and the traditional fourteen days of the lying in period which follow, but the long prelude of 280 days of gestation and the postlude of 90 or 120 days of involution.

To all familiar with current obstetric literature, the emphasis now placed upon the trinity of successful obstetric work, antenatal, intranatal and postnatal care, is quite apparent.

More and more the value of antenatal study—the strategy of obstetrics—and intranatal technic—the tactics of obstetrics or the true art of obstetrics—is being emphasized.

From the study of obstetric publications, it is obvious that the function of the accoucheur does not close with the supervision of the antenatal period, the intranatal care or the customary daily visitation during the fourteen days which follow.

His obligation does not cease until the completion of involution discloses that the mother has passed through her confinement and is physically as well, both systemically and locally, as she was before her pregnancy began.

The importance of this extended obstetric regime is now recognized in all well conducted maternity hospitals and in addition to the antenatal clinic, which has conspicuously and convincingly proved its worth, postnatal clinics are now being instituted and successfully conducted.

It may be of interest to mention that in many institutions both mothers and babies are kept under observation for one year, while in many others a longer period of supervision is followed.

In the Jefferson Maternity, we have instituted a course covering a period of two years. Accurate records are kept of both mother and baby. In this way, we hope to keep our

* Address delivered in the third session of the Tri-State Medical Society, Huntington, W. Va., September 9, 1926.

patients under observation, not only through one pregnancy, but the series which may follow.

While this plan, of course, is not possible to apply to all patients, it can be made to apply to a great many. There may be some question as to the applicability of such an extended plan in private practice, but if it can be made to succeed in hospital work, it can be made to succeed equally well in private work.

Progress of Obstetrics

Obstetrics is verily as old as life itself, but only within recent years has it been receiving the special and serious attention it deserves. The science and art of this department of medicine, one may regard, therefore, as of comparative modern origin. No other division of medicine can boast of, or rather bemoan, the long, dark centuries through which it has passed with its incomparable toll of human life.

One can not speak of the revival of obstetric art, or refer to an obstetric Renaissance, yet nearly all that is relatively new in obstetrics, has developed within the past forty years.

Modern obstetrics one must truly regard as a major surgical science, but to no other department of medicine in practice have such minor, if not indifferent, methods been applied.

Within recent years, prevention has held a regal position in all branches of medicine, so much so, that medicine in general one might regard as devoted largely to preventive means.

Gradually obstetrics is ascending to its proper plane with its sister branches and the profession at last, "though tardily enough," is beginning to realize that in obstetrics one finds the greatest of all opportunities to profit by prophylactic practice.

The Importance of Prophylaxis

From a study of the maternal as well as the fetal mortality throughout the world, it is obvious that something is woefully awry in present day obstetric work. No one will gainsay that the methods now in vogue are not superior to those followed a decade or two ago, but it can be gainsaid that the art has not kept abreast of the other division of scientific medicine.

In recent years there has been a material decrease in the fetal mortality, but the maternal death rate, still so unnecessarily high, remains unchanged.

A recent report of the Children's Bureau of the United States Department of Labor shows that the mortality from puerperal septicemia increased from 1900 to 1911, but since that time a slight decrease has been noted. The mortality figures from other causes show a steady increase from 1900 to 1921 and that the mortality from all puerperal causes has gradually been rising in this country. In comparison with other countries, the United States ranks with those having the highest obstetric death rate, though the deaths from septicemia in European countries has shown a decided decrease during the last twenty or thirty years.

The toll taken in maternal deaths is almost staggering, to say nothing of the multitudes who are rendered physically crippled by morbid sequelae.

The yearly maternal death rate from child birth in this country is comparable to the destruction of a city of considerable magnitude and of a city wholly composed of individuals of mature and useful years.

Tuberculosis, some one has said, is like a frost that nips the bud, while the complications of pregnancy and labor, one may say, not only destroy the bud, but cripple or kill the maternal stalk as well.

It is estimated that 16,000 women die every year in America from child birth, and Dr. A. B. Davis believes this estimate is far too low. DeLee states that more than 25,000 women die in this country every year from the effects of pregnancy and labor and that thousands of others are compelled to seek hospital treatment for the correction of damage sustained during parturition.

It is claimed that from 6000 to 8000 women die from septic infection, 5000 from eclampsia and 4000 from hemorrhage. Is it not safe to assert that 75 per cent or more of these should be protected from serious damage or saved from death?

Dr. A. B. Davis, in his presidential address, read at the last meeting of the American

Association of Obstetricians, Gynecologists and Abdominal Surgeons, stated that 75 per cent of the disabilities and deaths incident to child birth are wholly unnecessary. If the foregoing statements can be accepted, and there seems no valid reason why they should not be, it is obvious that the obstetric morbidity and the obstetric mortality are due to a weak obstetric policy.

From a study of published figures it is evident that a weak policy is not limited to any country, but is more or less universal. In Great Britain the obstetric death rate ranks on a par with that in this country.

In America, with an annual birth rate approaching almost two million, 25,000 mothers succumb every year.

In Pennsylvania the maternal mortality has not changed in the past seventeen years. The rate was 6.1 per cent per one thousand in 1906 and it was precisely the same in 1923. Twelve hundred and fifty-one mothers died from confinement in 1922 and the toll in 1923 was 1,373.

In England and Wales with an annual birth rate of 700,000, 3000 mothers succumb.

During the past ten years in Great Britain there has been a material reduction in the fetal mortality, but the maternal mortality has remain unchanged.

Fetal Mortality

During the year 1923, 138,259 babies died in this country before they reached the age of one year and the majority of these succumbed during the first four weeks of neonatal life. During the same period there occurred 69,757 still births or a total fetal death rate of 208,016. Some writers claim the mortality of new born babies, including still births, will total 300,000 annually.

In New York City, according to Polak, one baby out of every twenty-one is born dead and one out of every twenty-six dies before it is one month old, while one mother in every two hundred and fifty deliveries dies from infection or as an indirect cause of it. This author further claims that more than sixty-one per cent of all gynecological surgery is a result of bad obstetrical practice.

Statistics show that from three to five per cent of all new born babies die during delivery.

According to the United States Department of Labor, Children's Bureau, more than forty-two per cent of the babies dying under one year of age do not live to complete the first month of life. This report further shows that seven-tenths of this number die as a result of antenatal complications or from accident, or injury occurring at the time of birth. Of the babies who live less than one week, eighty-three per cent die of the causes named and of those who live less than one day, ninety-four per cent succumb from parturitional trauma.

While statistics provide fairly reliable data respecting fetal death in its relation to pregnancy and parturition, statistics can not compute nor can the mind comprehend the vast army of infants left physically disorganized or mentally crippled; herein lie the dark tragedies of childbirth. It is then obvious than a very considerable proportion of all deaths of infants under one year of age occurs during the first month of life from causes which have their origin in the care and condition of mothers during pregnancy and labor.

From a study of the causes of fetal mortality, it is obvious that more than fifty per cent of the deaths are wholly unnecessary. Eardley Holland in an examination of 300 fetuses, respecting fetal death, found more were killed by the complications of labor than died during pregnancy from maternal or placental disease. In a rough estimate of the number of babies who died, Holland claims at least fifty-two per cent might have been saved; twenty per cent by antenatal treatment, including sixteen per cent of syphilitic fetuses; twenty per cent by better technical means in treating the complications of labor and twelve per cent by a combination of improved antenatal and intranatal methods of treatment.

In a study of the causes of fetal death, Holland was especially impressed by two conditions, namely: syphilis and excessive cranial stress, the first because of its low incidence and the second, because of its unexpected importance.

Among the 300 fetuses studied there were only forty-two cases of proved syphilis and six of probable syphilis or sixteen per cent

in all. There were fourteen cases of possible syphilis, though there were no frank signs of this disease in the fetuses or in the placentae. Of 167 fresh fetuses examined, the tentorium was found lacerated in eighty-one or forty-eight per cent and this lesion was associated with laceration of the falx cerebri in five cases. Sub dural hemorrhage was found in all but six. Of the eighty-one fetuses mentioned, forty-six were delivered by the head and thirty-five by the breech.

In enumerating the causes of death of 300 infants reported by Holland, sixteen per cent of which were due to syphilis, ten per cent to toxemia and fifty-one per cent to complications of labor, including antepartum hemorrhage, it is observed that nearly eighty per cent of the deaths may be classed in the realm of prevention.

Antenatal Care

I shall first call attention to the revival of interest in and the wider adoption of antenatal care.

It has been well said that antenatal care is the strategy of obstetrics and it is to this part of my topic that I shall first direct attention. No one can gainsay that by the conscientious observance of antenatal methods one may greatly reduce intranatal complications. I am quite sure that most of the complications arising intranatally are the direct result of somebody blundering in antenatal study.

Studdiford, from studies made in the Antenatal Clinic of the Sloan Hospital, is convinced that prenatal supervision results in a great saving of life and paves the way for easier and safer deliveries. From a study of all patients passing through the Sloan Antenatal Clinic, it was found that seventeen per cent required special prenatal care.

In the Sloan Hospital there were delivered consecutively three thousand, six hundred and forty patients with one hundred and fifty-seven stillbirths. These stillbirths emphasize the value of antenatal treatment because the mothers who gave birth to the stillborn babies received very little, if any, prenatal study. An analysis of these patients discloses that sixty-one were admitted as emergencies, thirty-eight had been under observation less than two months and fifty-seven were under observation two months or more.

Bourne claims that the tremendous number of women disabled by pregnancy and labor, especially by the first labor, can be prevented by the practice of antenatal care. This writer also believes that it is the chief office of the accoucheur to ensure a woman who gives birth to a child the same degree of health she enjoyed before her pregnancy began. Reference is not made in this paper to antenatal work because it is new, or because of its practical utility in obstetrics, but chiefly because sound obstetric work can not be carried on without a substantial guide.

This is provided by conscientious antenatal care and if it is not conscientious it is worse than no care at all. Simply to see a prospective mother every four weeks, a mother preparing herself for one of the most sublime, yet at the same time, one of the most trying ordeals of the human body, is not enough nor any where near enough.

A general physical examination, both external and internal, should be made every four weeks, (more frequently, if necessary), during the first twenty-eight weeks of pregnancy and thereafter every week up to the thirty-sixth week. After this time, unless there be some special indication, the examination should be limited to the abdomen and rectum, not the vagina.

Routine blood pressure readings should be made and a rise above one hundred and forty, systolic, should call for more scrutinizing study. This together with a conscience clear urinalysis, should be made. Failure in these two simple expedients may expose the prospective mother and her baby to real danger or even a double fatality.

The "sink test," so often referred to waggishly, is a serious indictment against the individual who is second party to a serious obligation. He is only protected by the ethics of the profession, an ethical standard set up largely in the interest of a derelict physician, rarely in the interest of his victim.

I have had occasion to see the "sink test" in operation, exemplified in an array of decomposing specimens decorating a doctor's washstand. A sink, according to Webster, is

defined as "the lowest part of a closed basin whence the water of one or more streams escapes by evaporation." To practice obstetrics on this basis or basin is not good practice and if it is not good, it must be utterly bad.

I have already stated that 5,000 women at least, die every year in this country from toxemia. I am not unmindful of the fact that a small percentage of toxemias will slip by despite any known method of antenatal investigation, but I am equally confident that the majority of the toxemic deaths reported are wholly unnecessary.

A simple routine study of the blood pressure, combined with a routine urinary analysis is sufficient to cut the figures quoted from several thousand to a few hundred. The fundamental value of routine urinary examinations and blood pressure studies is only realized when a dire calamity results.

In collecting material for this presentation it was of consuming interest to observe the wide adoption of prenatal care. The far-reaching influence for good of this division of obstetric work is recognized universally.

The results of prenatal practice in Australia are the best probably obtained anywhere. During the year 1922, 869 pregnant women attended the antenatal clinic of the Royal Hospital for Women, Paddington, Sydney. Of this number 145 or seventeen per cent showed albuminuria of such a character as to call for supervision and treatment. Of the number mentioned no deaths occurred. Of 615 patients treated for albuminuria, only seven developed eclampsia, and all of these recovered.

The Wasserman Reaction

The method of investigation has become a recognized procedure of obstetric practice and it has been demonstrated conclusively that the reaction is positive in ninety-five per cent of mothers delivered of spirochete fetuses. Brown, according to Bourne, has never observed a negative maternal reaction in mothers giving birth to fetuses in whom the spirochetes were found.

The examination should be made in all cases of repeated abortion or if there are other reasons to believe in the existence of maternal syphilitic infection.

The reaction is now regularly practiced in all well conducted maternity hospitals and it is probable the test will become a routine examination in general practice, as well. By this mode of investigation combined with appropriate treatment, Polak has been able to reduce the rate of still births in the Long Island College Hospital to almost nil.

Pelvimetry

Pelvic mensuration has been taught for years, but this essential feature of obstetric art is so woefully ignored as to make one sometimes wonder if it ever constituted a part of obstetric instruction. To practice scientific obstetrics without routinely determining the diameters of the pelvis is comparable to an attempt to navigate the seven seas without a compass. It is here too, like acquiring a liability insurance policy after a medical disaster, that pelvic mensuration is not appreciated until a lamentable catastrophe occurs.

The value of discriminating antenatal care is so well set forth in a recent contribution by Bourne that it will pay all who run to read.

This author reports 409 cases of labor in contracted pelves showing a fetal mortality of fifty-two per cent in patients not receiving antenatal care and a fetal mortality of only twelve per cent in patients in whom antenatal care was instituted. Bourne found that in those patients coming to labor at term without prenatal study carried a fetal mortality four times greater than those in whom antenatal measures had been adopted.

One of the outstanding examples of the importance of antenatal supervision is, as already indicated, in the early recognition and treatment of syphilis.

Investigation has proved conclusively that the prompt recognition and equally prompt treatment of syphilitic disease, even if treatment be administered in the latter weeks of gestation, may wholly prevent the disease in the fetus.

As regards the treatment of syphilis antenatally, Studdiford claims that in his clinic good results invariably followed active therapy irrespective of the time of pregnancy the treatment was instituted.

Bourne regards this, the prenatal treat-

ment of syphilitic disease, as one of the chief triumphs of preventive medicine in obstetrics.

Antenatal Care and the Toxemias

Reference has already been made to the value of antenatal supervision with regard to the recognition and therapy of the toxemias. As a matter of emphasis, I shall, at this time, add a few words.

Occasionally, owing to the subtle nature of certain forms of toxemia, a few cases may elude the most painstaking physician, but, on the whole, what has been said regarding conceptional syphilis applies equally to the toxemias.

Antisepsis and Asepsis

It may not sound euphonious to extol the virtue of Listerism, a measure now more than a half century old, in its application to obstetric practice. However, I am familiar with no department of medicine in which antisepsis and asepsis are more imperatively indicated, yet so meagrely practiced.

Prior to the adoption of this transcendent asset of the obstetrician, the mortality in the maternity hospitals of Paris was twelve per cent. With the adoption of antisepsis in 1889 to 1898 the mortality fell to 0.69 per cent and with the adoption of asepsis in 1898-1908, it decreased to 0.29 per cent.

Antenatal Care and Intranatal Complications

Certainly no one will question the value afforded by antenatal examination in aiding one in recognizing disproportion and malposition and in enabling one, therefore, to adopt proper antenatal or intranatal methods, (the tactics of obstetrics), in effecting safe delivery.

Obstetric practice is a major surgical problem, but rarely in general obstetric work are sound major surgical principles adopted and rigorously followed. It is estimated that in this country 6000 women die annually of septic infection. The vast number who become infected but do not die, though rendered more or less physically disabled, is almost beyond estimation.

With regard to mortality and morbidity, septic infection stands in the foremost rank. It is only when the extraordinary susceptibility of parturient women to infection is appreciated, combined with the institution of an antiseptic and aseptic regime and the routine use of the rubber glove, literally the hand maiden of the obstetrician, provided by Halsted thirty-three years ago, will the tragedies of septic infection be overcome.

Rectal Examination

I am confident most observers agree that the common practice of routine vaginal examination, is not only dangerous but rarely necessary. I am persuaded also that one is able to garner all necessary knowledge by abdominal and rectal examination. The rectal method of manipulation, moreover, affords as much information as the vaginal procedure without the dangers this method entails.

In the last three hundred consecutive deliveries in the Jefferson Maternity only one vaginal examination was made. Even in this case, I believe, the measure was not an advantage, but an encumbrance. Rectal examination, advocated one hundred years ago, according to Meigs, by Velpeau, was resurrected in this country by Ries in 1893, and about the same time by Kroenig, of Freiberg, Germany.

Velpeau, in the fourth edition of his textbook on midwifery, translated by Charles D. Meigs in 1831, said: "Among other things I have endeavored to show the advantages of touching by the rectum, as well as of abdominal exploration, in a vast number of cases."

It was not until the introduction of the rubber glove, however, that wider interest in the method was aroused. Here in the East, rectal examination has not been given due recognition, but in the middle West, and beyond, it is the examination of choice. In certain maternity hospitals bordering the Pacific slope vaginal examinations are not permitted, especially by the resident internes. In no patients is the vaginal examination made outside of the delivery room and then only after the most careful preparation of both patient and attendant. Thus far I have said very little, if anything new, regarding "The Management of Labor." I have only tried to reiterate or re-emphasize old truths, but truths nevertheless, which are not fully appreciated and more tardily practiced.

Chemical Analysis of the Blood and Urine

A great deal of investigation of the blood and urine has been carried on with respect to the early recognition of pregnancy and its complications. In this paper reference will be made only to certain procedures of proved practical utility.

As a means of diagnosis, especially with regard to the toxemias, the chemical examination of the blood has evoked widespread interest, but, except in a few instances, thus far no logical deductions have been forthcoming. The test devised by Van den Bergh is of real diagnostic value and when positive indicates definite biliary obstruction or altered hepatic function and structure. This test we have found of real worth in the diagnosis of toxemias of hepatic origin.

The Rosenthal test designed to determine liver derangement has also proved of real value in differentiating neurotic from true organic vomiting of pregnancy.

In the study of a large series of cases, Krebs and Dieckman claim the Rosenthal method will reveal impending toxemia and that it is of unusual value as a method of differentiating neurotic from pernicious vomiting. They find it, also, of value as a means of determining the functional capacity of the liver under the stress of pregnancy.

It has long been known that in pregnancy carbo-hydrate metabolism is in some way disturbed, but the precise factors influential in the alteration are not understood. Metabolic imbalance with the tendency to glycosuria in pregnancy has been employed as a means of diagnosis in the early weeks of gestation, especially in those patients in whom the clinical signs are not clear.

Investigation has shown that the metabolic phenomena which provoke glycosuria occur early in pregnancy, so much so that the biochemist regards glycosuria as one of the earliest changes taking place in this condition.

It has been demonstrated conclusively that glycosuria will arise in a large number of pregnant women during the earliest weeks of gestation, if fifty to one hundred grams of glucose are administered.

Crook, according to Bourne, studied 548 patients, including certain abnormalities of pregnancy and found that 166 or thirty per cent had sugar, other than lactose, in the urine.

The Toxemias

At this time, I should like to refer to the toxemias of pregnancy and particularly to the so-called pre-eclamptic toxemia and to eclampsia itself. Reference has already been made to eclampsia as a preventable disease and this type of toxemia is now described in all textbooks as pre-eclamptic, (including those cases of albuminuria, edema, hypertension, blurred vision, scanty urine, etc.) and eclampsia proper. I have already stated that an occasional case of fulminant eclampsia with prodomes of an exceedingly subtle type or no prodromes at all may evade the most conscientious study, but, in the main, most cases present a clinical picture of distinction and hence should not slip by.

It has been demonstrated that by a simple conservative plan, including rest, simple feeding, moderate fluid intake, free elimination and a salt free diet, the convulsive stage of this obstetric tragedy can be almost wholly eliminated.

Heretofore, the therapy of eclampsia itself has been of an exceedingly variable character and even today there is not an unanimity of opinion respecting the course to be adopted. Opinion gradually is crystalizing in favor of the conservative plan and no longer is the disease regarded as an obstetric emergency and treated as such.

There still exists two schools, however, one with a small corps and the other with a large and growing corps of teachers, the one advocating prompt and rapid termination of pregnancy and the other favoring an expectant medical course. From a study of the most recent literature, it is obvious that the school advocating conservatism is most popular. Personally, if I were asked to join forces with either, I should without hesitation matriculate in the conservative school.

Recently, de Wesselow and Wyatt reported 2000 collected cases of eclampsia. The different types of treatment with the results obtained thereby are shown in the following table:

Treatment	Mortality Mild Cases	Mortality Severe Cases
Natural delivery	4.5 per cent	36.9 per cent
Assisted delivery	5.6 per cent	31.7 per cent
Induction	6.6 per cent	26.4 per cent
Cesarean section	11.3 per cent	46.3 per cent
Accouchement Force	18.1 per cent	63.1 per cent

The figures presented in this table confirm the growing conviction that the less done to hasten delivery the better the prognosis. The table also shows that accouchement force, no longer practiced in America, should be definitely eliminated as a therapeutic recourse.

Stander says the mortality of eclampsia in the Obstetric Department of Johns Hopkins Hospital has been reduced fifty per cent by the expectant medical plan.

Wilson refers to 247 cases of eclampsia treated in the Johns Hopkins Hospital from its opening in 1894 to 1924.

The cases are divided into two groups. The first comprised 110 cases and they were treated by the methods formerly in vogue with twenty-one deaths or a mortality of 24.8 per cent. The second group, treated along more conservative lines, comprised 137 cases with fourteen deaths or a mortality of 12.8 per cent.

Wilson claims that the end results under the conservative plan are twice as good as the more radical forms of treatment previously practiced.

De Wesselow and Wyatt refer to another series of 2000 cases treated by expectant means with a mortality of 9.8 per cent. These writers included in their analysis 230 cases last recorded by Stroganoff, with a death rate of 1.7 per cent and also 204 cases treated in the Rotunda Hospital, Dublin, with a mortality of 10.29 per cent. Professor Stroganoff reports his last series of eighty cases without a single death.

For some time there has appeared in the literature repeated reference to the value of magnesium sulphate in the treatment of eclampsia, administered either intra muscularly, intra venously or intra spinally. All the reports presented seem to indicate that magnesium sulphate is of real service. It is administered in from twenty-five to fifty per cent solution and as much as 100 cc. have been given within twenty hours without disquieting effects. It is claimed that the material will:

(a) Control convulsions.

(b) Provide relaxation.

(c) Decrease intracranial pressure by overcoming edema.

(d) Stimulate diuresis.

(e) Diminish general edema.

Quite recently Dorsett reported thirty-eight cases of eclampsia treated with magnesium sulphate with two maternal deaths, one on the tenth day from cerebral hemorrhage and the other in a patient moribund on admission to the hospital. In the series there were nine fetal deaths, one from forceps trauma, four fetuses were macerated, and four were premature, weighing under 1300 grams. The convulsions in the series of cases reported ranged from one to twenty-eight and these were wholly controlled in ten patients and reduced from fifty to seventy-five per cent in the remainder.

Dorsett administers the drug intra muscularly and he uses a twenty-five per cent solution. His average dose is fifteen cc.

Lazard treated seventeen cases of ante, intra and postpartum eclampsia by the intravenous injection of twenty cc. of a ten per cent solution of magnesium sulphate, and he states the results were uniformally successful. Lazard claims that this form of therapy will control "convulsions," clear up "coma," promote "diuresis" and overcome "edema." From one to three injections were made and the intervals from two to four hours.

After the adoption of this method of treatment, supplementary therapy, as gastro-intestinal lavage, phlebotomy and catharsis, was gradually abandoned.

Alton and Lincoln, working along the lines suggested by Haubold and Meltzer, used magnesium sulphate intraspinally in a number of cases and the results, they claim, were most encouraging. They recommend a twenty-five per cent solution and the administration of one cc. to each twenty-five pounds of body weight. In case of respiratory failure following an overdose of magnesium sulphate,ten cc. of a twenty-five per cent solution of calcium chloride, should be given intravenously. This is said to have a balancing effect on the magnesium salt.

The Obstetric Forceps

Of all utility instruments, the forceps is by far most widely used. It might be said that in some hands it is used too widely, while in others it may not be used widely enough.

The instrument had its conception in the brain of Peter Chamberlen, a London physician of Hugenot ancestry, in the latter part of the sixteenth or very early in the seventeenth century. Owing to the invention being kept a family secret, it did not become widely known until one hundred years later, or in 1813, when three forceps were found in an old chest in a house in which members of the Chamberlen family at one time resided. These three implements, it is believed, belonged to the Chamberlens and were the forceps which the various members of the family had employed.

After the design of the instrument became public property, modification began and it has been modified, metaphorically, by almost every obstetrician ever since.

Recently, two modifications have been placed before the profession, one in 1915 by Kielland, of Norway, and one in 1923, by Barton, of Plattsburg, New York. These implements are said to be of special value in application to the head high in the pelvis and presenting in the transverse or nearly transverse diameter of the inlet. The Kielland instrument is, also, used by some accoucheurs in posterior rotation of the occiput and it is said to be of real service with the occiput in this position.

The general feeling regarding the application of forceps to the head "high" in the pelvis is not one of approval. Personally, I regard a high forceps delivery as one of the most difficult, as well as one of the most dangerous operations for both mother and child. I look upon this procedure as so dangerous, that I adopt the recourse only under the most exceptional circumstances. With the mother and child in good condition, an elective Caesarean section, I feel, offers infinitely more for both. The "high" application of the obstetric forceps should have, in my judgment, a very limited field of use in obstetric practice. In patients potentially infected, the utility of podalic version should be remembered.

More and more the dangers, both maternal and fetal, of this operation are becoming realized. Unquestionably, the forceps operation should be limited, on the whole, to the median or low application. Even the frequency of the median operation may be greatly reduced, if one only remembers *that a head able to reach the mid pelvis is likewise able to reach the pelvic floor.* Hence, in the great majority of cases, the application of forceps may be restricted to the low operation.

Cesarean Section

This paper I would regard incomplete without referring to a method of delivery which has gained wide popularity, perhaps too wide a popularity, within the past few years. I allude to the operation of Cesarean section.

The operation dates back to antiquity, though it did not become an established obstetric procedure until the early part of the fifteenth century. In even mentioning this operation I may be accused of going far afield in search of material for a paper which is supposed to embody modern methods in the Management of Labor.

The operation of Cesarean section, first placed on a rational basis by Sanger in 1882 and developed to a standard of modernity during the lifetime of most men here assembled, may be regarded, therefore, as of comparatively recent origin. My excuse for including this phase of obstetric surgery in this paper is founded on the fallacious assumption that abdominal delivery is not fraught with more danger, both from the aspect of morbidity and mortality, than the ordinary clean abdominal section.

I am familiar with no conception so erroneous or one that is less substantiated by sound surgical experience. A competent surgeon may perform several hundred clean abdominal operations without an alarming morbidity or even without a fatality. Deaver has performed several hundred consecutive appendectomies without a death and Montgomery has performed his method of shortening the round ligaments more than four hundred times consecutively with similar results.

No figures relating to the morbidity and mortality of Cesarean section of a like nature

have ever been reported and it is altogether likely no figures ever will. That the operation is associated with a mortality infinitely greater than that following simple abdominal surgery is confirmed by the investigation of the committee on infant welfare of the Massachusetts Medical Society. A report submitted by this committee discloses that the maternal mortality in the state of Massachusetts in 1920 was greater than in 1910 and that as a cause of death Cesarean section ranked second to septic infection.

Holland reports the mortality figures of thirty-seven British hospitals with a series of 4197 sections carrying a mortality of four per cent. Eden and Holland present a table in which the operation was performed for contracted pelvis as follows:

When Performed	Tot. Cases	Mort.
Not in labor	1189	1.4%
Early in labor	384	1.8%
Late in labor	213	9.4%
After induction	35	14. %
After attempts at forceps, delivery, etc.	102	26.5%

The procedure it thus seems is fraught with definite danger, but even so perhaps no operation in obstetric surgery is so frequenty performed on so slight a pretext or no pretext at all.

Lacerations

It is wholly impossible to embody in this paper all the features essential to the scientific management of labor, but even with the possibility of being censured for presenting a paper of undue length, I feel that I should not leave the opportunity go by without referring briefly to parturitional damage of the birth canal.

Cervical Lacerations

Because of their frequency, as well as the conditions to which they predispose, both immediate and remote, I shall refer first to lacerations of the cervix.

Extensive cervical tears, like most serious complications arising in labor, fall largely in the domain of prevention. Apart from cervical damage resulting from malposition, malformation or disproportion, it is safe to say that most tears arise either from malicious manipulation or faulty instrumentation, or both.

In normal labor serious injury of the cervix should not occur. As to whether repair should be primary, intermediate or secondary, depends on the condition of the patient and her environment. With ideal surroundings and with the conditions of the patient favorable, I am convinced that primary repair should be performed routinely.

As regards the primary operation for cervical injury, moderate or extensive, it seems to me that the same law should apply as in acute injuries of other portions of the genital tract, provided, of course, environmental conditions are favorable for safe technical work. In most instances this provision obtains only in well regulated hospitals and hence under ordinary circumstances, primary cervical repair can not be performed successfully in private homes. The routine practice of cervical repair in private homes is not desirable, nor under such circumstances is the operation safe.

Unless the operation be performed by skilled hands and under good surgical surroundings, complications of a more serious nature than the primary trouble (infection as the outstanding example) are courted. Lacerations sustained during the course of labor in private homes, while unsuitable in most instances for primary repair, should not, owing to the danger of remote complications, be permitted to go uncorrected indefinitely.

Patients who sustain cervical injury should frankly be informed of the trouble and should be advised of the necessity of intermediate, or preferably and far better, secondary repair.

Lacerations of the Anterior Vaginal Wall

Parturitional damage of the anterior vaginal wall, while occasionally, like those in the cervix, inevitable, are for the most part preventable. Injuries of this region, however slight they may be, owing to the tendency of bleeding and their far-reaching influence on subsequent bladder function, should receive immediate correction.

Lacerations of the Perineum

Injuries of the pelvic floor and perineum of varying extent are almost inevitable in primipare. The injury may assume the form of an open wound, as it does very frequently,

or, as it does still more frequently, a sub mucous diastasis of the levator muscles with later the telltale development of a hernia or rectocele.

I am confident all are able to recall the emphasis our teachers placed upon the various methods of perineal protection during our student days, but I am acquainted with no method of perineal protection which really protects. I do not mean to imply that the protective measures we are customarily taught to employ should be ignored. They have a place in obstetric practice, but despite their adoption, injuries of varying extent do occur and they probably always will stand as one of the ultimate results of childbirth.

With the judicious use of anesthesia, skilled instrumentation, care in delivering the head and still more care in delivering the shoulders combined with manual (though in itself a feeble measure of utility) protection, injuries may be minimized in extent or largely prevented.

In face of a threatened laceration, I am acquainted with no resource so helpful as an episiotomy, lateral or median. Personally I prefer the median operation in the form partially of a vertical and partially of a racket incision. By this simple maneuver grave injury of the sphincter muscle, the bowel or both, may be prevented. Moreover an episiotomy wound provides clean cut surfaces which are easy to approximate by suture and healing, besides, is much more satisfactory than obtains in an irregular ragged wound.

With the respect to the time of operation, I am convinced that the primary procedure is far superior to the intermediate or secondary. In all cases of perineal damage, provided the condition of the mother is propitious and all other essentials favorable, the primary operation should be performed routinely.

Whatever course be adopted, it should be the fundamental aim of the operator to restore the parts along strict anatomical lines, muscle to muscle, fascia to fascia and skin to skin. For the former it is our custom to use interrupted suture of chromicised catgut, number two, and for the skin interrupted sutures of chromicised catgut, number 0. The deep sutures are tied tightly, but no tension whatsoever should be applied in tieing the skin sutures. Simply to hold the skin edges in accurate apposition is all that is necessary. With reference to nonabsorbable sutures, it only remains to say that these materials we never employ or recommend.

Anesthesia

Anesthesia in obstetrics is a topic of absorbing interest, but it is impossible to consider the many features of the subject in this paper. I shall limit this phase of the Management of Labor to an epitome of this interesting problem.

Indeed, since it is well known that almost all types of anesthetics with all known methods of administration have been used, very little need be said regarding anesthesia in labor.

If the great variety of anesthetic agents recommended may be regarded as sound criteria of their value, it becomes obvious that none are wholly satisfactory. The ideal anesthetic, like ideals in general, is difficult to find and it may be prudent to say that the ideal obstetric anesthetic, likewise, has not been found.

Chloroform

Chloroform, it has long been taught, is especially safe in labor, but this drug is not without real danger. It may be of interest to mention that it is still used by Stroganoff and certain English obstetricians even in eclampsia, but in this condition, invariably complicated by grave hepatic degeneration, it would seem, from a theoretical standpoint at least, exceedingly unsafe.

Nitrous Oxide

This combined with oxygen is perhaps one of the best anesthetics in uncomplicated labor. In the toxemias, however, it may prove one of the most dangerous methods of all. In the use of nitrous oxide, the element of expense arises. However, I realize that economics should not be considered in dealing with human life, but expense either in hospital or in private practice is a factor that can not be ignored. Nitrous oxide is the most expensive type of anesthesia and in routine practice, either private or institutional, its use is impracticable and almost prohibitive.

Ethylene

This gas has been employed in all forms of operative surgery and it has been used, also, quite extensively in obstetrics. By some men it has been highly extolled, but ethylene has potential dangers which render it unsafe for ordinary use.

Spinal Anesthesia

This method of anesthesia has its advocates, and we have used it in our work on numerous occasions. We do not regard it as a safe anesthetic and since it is recognized as the most dangerous of all anesthetic measures, it should rarely be employed.

Twilight Sleep

This method of obstetric anesthesia created a professional as well as lay stir shortly after its introduction twenty years ago. It has had the test of time, the best of all tests, and as a result it has gradually fallen into discard. The method is seldom used as originally designed, but modification of twilight sleep, "Morphine and Hyoscine," I personally believe, is one of the best methods at our disposal in the first stage of labor, especially when the labor is prolonged and in primiparous patients.

Local Anesthesia

Local anesthesia, one can not truly regard in the light of an anesthetic measure, espepecially with regard to labor. Sacral and caudal injections of various forms of anesthetic drugs have been used, but these methods have gained but scant recognition. Local anesthesia is being used more and more in operative delivery through the abdominal route, and in the Chicago Lying-In Hospital over 300 consecutive Cesarean sections have successfully been performed under this method. In Cesarean delivery, local anesthesia is given first choice in this hospital.

Caudal Anesthesia

This method we have used, but we have not found it a satisfactory measure in our work.

Rectal Analgesia

This method has created widespread interest and all in all it provides satisfactory results, especially in primiparous women. In order to render the very best service, the technic, as originally described by Gwathmey Davis, Harrar and others, must rigorously be followed. It should be administered by a doctor and not by a nurse. It is exceedingly important that the patient be kept under close observation throughout the course of analgesia, beginning with the initial hypodermic injection of morphine combined with magnesium sulphate and followed by the installation of ether, quinin and oil by the bowel.

If properly administered, this method provides a large percentage of satisfactory results in patients, as we have already stated, in their first confinement. Unless the patient is kept under constant supervision, it may occasionally happen that the baby will be born without the knowledge of the patient. On several occasions, the baby has been found resting between the mother's thighs, the patient herself passing through her confinement wholly unconscious of the process. This is one of the chief reasons why the patient should be kept under observation constantly.

Rectal analgesia is not a method one may employ with impunity in routine obstetric work, unless it is conducted in a well managed maternity hospital. In private practice it can not be used unless special arrangements be made for the physician to look after the patient personally or have her under the care of a competent assistant or a nurse familiar with this method. In all, there are no serious untoward effects from this method. I am convinced that on a few occasions the blood loss has exceeded the normal, but whether the anesthetic was responsible for the seemingly excess bleeding, we have not been able to determine definitely. The same statement is true regarding fetal cyanosis. On two or three occasions, we have noted marked cyanosis of the fetus, but this has not occurred with sufficient frequency to place the responsibility on the method. On the whole, I should say that in hospital practice it is the best type of analgesia at our command, but it is not suitable for maternity work in private homes.

My assistants and I have used rectal analgesia in more than 100 patients—largely primipara—and thus far we have observed no serious accidents or complications which we could attribute to the method.

Septic Infection

In concluding this contribution to "The Management of Labor," I wish to refer briefly to the present conception regarding the etiology and the therapy of puerperal sepsis. It is now generally conceded that in a small percentage of cases, infection may arise from within. In the vast majority of cases the source of the infecting organism is indubitably from without and hence, in the vast majority septic infection is a preventable disease. To the preventive measures brief reference has already been made.

Recently a great deal of attention has been given to the revival of sterilization of the blood stream by the intravenous administration of antiseptics. Of the great many antiseptics used mercurochrome is the most recent and has gained widest popularity. Unfortunately this drug, like the administration intravenously of other antiseptic preparations during the past twenty-five years, has not, as it was cherishly hoped, increased our optimism regarding the successful treatment of puerperal infection.

Extended investigation has not supported the view of the sponsors of this method of medication. The most efficient recourse seems to reside, first in the means of prevention, and second, in giving the infected patient a chance to get well without too much meddlesome therapy.

Koehler, who has recently presented a survey of the subject in an excellent monograph covering more than two hundred pages, expresses the opinion that a rational therapy of puerperal infection is not forthcoming. In his hands curative methods, based on the introduction of antiseptics, foreign proteins or sera into the blood, have proved unavailing. Convincingly good results, he says, can not be proved for any form of therapy so far suggested and tried.

From a careful study of his own experience combined with a critical study of the literature, Koehler says that at present we are unable to cure patients suffering with puerperal infection by specific means.

CONCLUSIONS

(1) Success in obstetrics especially with respect to the management of labor is dependent on the rigorous observance of antenatal, intranatal and postnatal rules. One can not function without the other.

(2) A good intranatal obstetrician must be a good antenatal obstetrician. The work is complementary, though of the two, antenatal care is of superior importance.

(3) Since one may justly regard antenatal care as the protective goddess, the *Juno Lucina* of obstetrics, it is incumbent that the aid of this deity be more zealously evoked.

(4) Is it not better to intercept a would-be assassin before gaining entrance, than complacently await an encounter?

(5) Is it not considered good generalship to conduct a campaign along safe lines of strategy rather than design emergency tactics during the turmoil of battle?

(6) Sir Frederick Treves never missed an occasion to impress his associates and assistants with the slogan: "The secret of surgery is the clean nail brush." In paraphrasing the maxim, I should like to say that the secret of successful obstetrics is the clean patient, clean attendant, clean implements and clean everything.

(7) Once more, I wish to re-emphasize the importance of prevention in all phases of obstetric practice, for herein resides the secret of successful work.

(8) In obstetrics greater opportunities are offered for prohpylactic means than in other departments of medicine. Let us heed the signs of the times to the end that we, and above all our patients, may profit thereby.

(9) Since most serious complications of pregnancy with sequelae still more serious are preventable and since dangerous complications of labor with their still more serious sequelae are preventable, then antenatal care becomes preventive obstetrics and intra or post natal care preventive gynecology.

(10) Since intelligent antenatal and postnatal supervision are the legitimate right of every patient, "God forbid that any member

of our profession to whom a woman trusts her life, doubly precious at the most eventful hour of her existence, should hazard it negligently, inadvisably or selfishly." (Morris.)

REFERENCES

Alton and Lincoln: American Journal Obstetrics and Gynecology, February, 1925, Vol. 9, No. 2.

Bourne, A. W.: Recent Advances in Obstetrics, 1925.

Davis, Asa B.: American Journal Obstetrics and Gynecology, February 1926, Vol. 11, No. 2, p. 152.

Dorsett, Lee: American Journal Obstetrics and Gynecology, February, 1926, Vol. 11, No. 2, p. 227.

Flint, A.: Amer. Jour. Ob. & Gyne., June, 1925, Vol. IX, No. 6, p. 864.

Holland, Eardley: The Causation of Fetal Death, 1922, p. 7.

Koehler, Robert: The Therapy of Puerperal Fever, American Edition, 1925.

Krebs, O. S., and Dieckman, W. J.: American Journal Obstetrics and Gynecology, January, 1924, Vol. 7, No. 1.

Mosier, G. C.: Journal Missouri Medical Association, April, 1925.

Morris, E. D.: Medical Journal of Australia, Sept. 12, 1925, Vol. 2, No. 2, pp. 301-333.

Lazard, E. M.: American Journal Obstetrics and Gynecology, February, 1925, Vol. 11, No. 2.

Stander, H. J.: American Journal Obstetrics and Gynecology, March, 1925, Vol. 9, No. 3.

Studdiford, William E.: Boston Medical and Surgical Journal, October 2, 1924, Vol. 191, No. 14, pp. 617-624.

Wesselow, de, O. L. V., and Wyatt, J. M.: Modern Medical Monographs, 1923, pp. 73-74. D. Appleton & Co.

Wilson, Karl M.: American Journal of Obstetrics and Gynecology, February, 1925, Vol. 9, No. 2.

A CASE OF UTERUS BICORNIS UNICOLLIS WITH RUPTURE OF A GRAVID HORN FOLLOWED BY OPERATION AND RECOVERY *

By BEN F. BRUGH, M. D.
Montgomery, W. Va.

THE OCCURRENCE of uterus bicornis unicollis is not sufficiently rare to warrant a report on an uncomplicated case. This paper is based upon the study of a pregnant bicornate uterus that ruptured at the end of two and a half months of gestation, making operative interference necessary.

Embryology

The occurrence of bicornate uterus can be understood only in the light of the embryological development of the uterus. Very early in embryonic life the mesonephric tubules develop and expand so rapidly that there is not room for them in the dorsal body wall. As a result of this rapid expansion the dorsal wall bulges ventrally into the coelom, producing the uro-genital fold. Owing to the early great development of the suprarenal glands and metanephroi, the cranial portions of the uro-genital fold, at first parallel and close together, are displaced laterally. This produces a double bend in each fold so that it consists on each side of a cephalic longitudinal portion which lies lateral to the site where it originally developed, a middle transverse or oblique portion which courses medially from above downward, and a caudal longitudinal portion which, at first, retains its original position. The caudal portions from each side soon fuse to form the genital cord.

When the embryo is about ten millimeters in length the Mullerian ducts form from the lateral portions of the uro-genital epithelium. The cephalic ends of these ducts remain patent and form the abdominal ostia. As the ducts of Muller are developed in the uro-genital folds they make the two bends already described. The cephalic portions of the Mullerian ducts lie lateral to the mesonephric ducts but lower down they cross the mesonephric ducts and enter the genital cord medial to them. The caudal ends of the Mullerian ducts are pressed close together between the mesonephric ducts and fuse to form the utero-vaginal anlage. A condensation of mesenchyme around the anlage and around the medial portion of the transverse parts of the Mullerian ducts forms a clear-cut layer from which the muscle and connective tissues of the uterus and vagina is differentiated.

The lateral non-fused portion of the trans-

*An original article.

verse parts of the ducts of Muller and the cephalic longitudinal portions become transformed into the Fallopian tubes.

The process briefly outlined above is really quite a complicated one and, as a result, many abnormalities of the uterus and vagina may occur. Those most frequently encountered are:

1. Complete or incomplete uterus bircornis with either a single or double cervix due to incomplete fusion of the ducts of Muller. There may also be a rudimentary horn attached to an otherwise normal uterus.

2. Complete duplication of the uterus and vagina due to the failure of the caudal portions of the Mullerian ducts to fuse.

Other variations from the normal are encountered from time to time. The reader is referred to Volume II of Keibel and Mall's work on embryology for a detailed discussion of the developmental abnormalities.

Frequency

We have been unable to find statistical data as to the frequency of rupture of the pregnant horn of a gravid bicornate uterus. We have, however, obtained reports from several of the larger obstetrical clinics run in connection with leading medical schools. These reports, standard text books and case reports in the various obstetrical journals indicate that the occurrence of bicornuate uteri is an unusual occurrence, only a relatively small number of cases being recorded.

Case Report

Mrs. U., white, age 18, a primigravida. Family history and past history are unimportant in relation to the condition here reported. The patient believed that she was normally pregnant, her last menstrual period being January 27, 1926. During the latter half of February and throughout March she was slightly nauseated but this was not more severe than is usual in a normal pregnancy. On April 10, 1926 she suddenly developed severe nausea with some vomiting and very severe abdominal pain which was general in the lower abdomen, sharp and cramp-like in nature. During the day she fainted three times and felt generally weak and unsteady. She was seen by her local physician and referred to the hospital for study.

At the time of her admission to the hospital, April 11, 1926, she had a pulse rate of 120, temperature of 98.2 with a respiratory rate of 22. Her general symptoms were essentially the same as they had been the previous day; i. e., nausea, vomiting and cramp-like pain in the lower abdomen.

Inspection showed a well-developed, well-nourished but very anemic-looking white woman. The conjunctivae and lips were extremely pale. The general physical examination was essentially negative except the abdomen, which was slightly distended and showed marked tenderness over the lower portion. Moderate rigidity of the abdominal muscles was present.

Upon making the pelvic examination it was found that the patient discharged a small amount of blood when she strained, as for instance, in coughing. When she was quiet there was no bloody discharge. The perineum was found in good condition, well-supported and with good muscle tonicity. The cervix was in the normal position and was somewhat softened with the uterus slightly enlarged. There was a marked sense of resistence and some bulging in the left cul-de-sac which was extremely tender. The patient complained of rectal pain and tenesmus which was probably due to the pressure in the cul-de-sac.

The laboratory examinations showed 15,000 leucocytes with 83 per cent poly-morphonuclears and a hemoglobin of 43 per cent.

From the above data a diagnosis of ruptured ectopic pregnancy was made and the patient prepared for operation. The midline incision was used. Examination showed that the uterus was of the true bicornate type rather than the usual normal type. The tubes and ovaries were essentially normal. The left cornu had ruptured and was badly shattered. The fetus and placenta were found lying in the peritoneal cavity and were, of course, removed. The cul-de-sac was filled with clotted blood which was taken out and the pelvis cleaned up. The left tube and the shattered left horn of the uterus were removed and a plastic operation performed upon the uterus. The fetus which was removed had a crown-heel measurement of nine centimeters.

The post-operative course of the patient was uneventful and she was discharged from observation in good condition June 10, 1926.

PRIAPISM—REPORT OF A CASE REQUIRING SURGICAL TREATMENT *

By C. F. FISHER, M. D.
Richwood, W. Va.

PRIAPISM *per se* is a relatively uncommon condition, and by some considered so rare as to be classified as a curiosity. The object of this paper is not to record a "curiosity," but to demonstrate that all cases of this condition are not always amenable to medical treatment.

The etiological factors usually met with as mentioned by Hinman are as follows: Phimosis, fissure in ano, toxemia, cantharides, diabetes, nasal polypi, myelitis, spinal fractures, tumors of the spinal cord, tabes. These are given as the nervous causes, and the following as mechanical: Sexual excess with or without thrombosis of the corpora cavernosa, thrombosis due to systemic infection, infiltration from neoplasm, angioneurosis. This condition is most common between the ages of twenty and fifty. Sexual desire is absent and difficulty of urination is usually present. Many cases subside spontaneously, or after the removal of the exciting cause.

The surgical care as stated by Hinman is as follows:

1. Division or injection of the internal pudic nerve.
2. Ligation of the dorsal arteries.
3. Division of the ischiocavernosi muscles.
4. Cases of thrombosis, incision.

Below follows the report of a case referred by Dr. J. G. Leach, of Quinwood, W. Va., and treated at the McClung Hospital, Richwood, W. Va.:

W. A. H., age 49, married, farm laborer, was admitted to the hospital July 22nd, 1925, for treatment for "continued painful erection."

His family history was unimportant, and is not given.

His past personal history is likewise negative, and he denies all venereal infections. Habits are negative except that he uses a great deal of tobacco.

On admission he stated that the erection had persisted since July 8, 1925, and that he had not had intercourse for five months, but had had normal erections. During the afternoon of July 7 he had a dull aching sensation in the scrotum associated with incomplete erection. He slept well the night of July 7, and upon arising found the penis in a state of super-erection, and urination almost impossible. Pain was present and severe, dull and intermittent, but later sharp in character. The left scrotum was swollen and remained so for one week. He sought intercourse for relief, and this was denied by his wife, and he resorted to masturbation. Immediately after this act the penis became slightly flaccid. Next morning upon arising the entire penis was firm as before and the pain even more severe, and his condition steadily grew worse, and the penis became purplish in color. When seen by his physician he was referred to the hospital.

This patient was admitted walking, with assistance, and unable to stand erect. Temp. 97, pulse 132, skin cold and covered with perspiration.

When seen on the day of his admission the erection had already persisted for two weeks.

Examination of the head, neck, throat were all negative. Teeth were all bad. Heart and lungs were normal, and a careful examination of the abdomen revealed nothing abnormal. Reflexes were present and normal. Blood pressure: systolic 145, diastolic 90. The penis was abnormally firm, pressing against the abdomen, and purple in color.

* Read before the Central West Virginia Medical Society, August, 1926.

Manipulation caused excruciating pain. Examination of the scrotal contents was negative except a slight induration of the left epididymus. No anal fissure or hemorrhoids present, and the prostate and its secretion was normal. A voided specimen of urine was normal. Wasserman negative. Blood picture normal.

Our impression at this time was priapism probably of thrombotic type.

Medical treatment was instituted as follows:

Hot moist applications to penis and scrotum.

Sodium Bromide grs. 20 with Chloral Hydrate gr. 10 every four hours by mouth.

Morphine Sulphate gr. 1-6 every four hours.

This treatment was continued until ten o'clock the following day, with no results.

Operation was done under ether anesthesia, and the erection continued under moderately deep anesthesia. After proper preparation the right corpus cavernosum was incised and the penis gently massaged and about three quarters of an ounce of blood, black in color, removed. Incision into one body should drain both, as the anastamosis is very free, but in this case it was necessary to drain the other by incision, and blood of the same color, consistency and amount removed in the same manner. The penis became normal size and flaccid. The skin incisions were closed with fine silk sutures, and the dressing secured with collodion.

The following evening the penis was greatly swollen, and this swelling persisted until the afternoon of the next day. Four days later all edema had disappeared, penis flaccid, without pain, and patient voiding normally. The sutures were removed on the ninth day.

On the morning of the tenth day he awoke with a normal erection, with sexual desire. This was present each morning up to the time of discharge from the hospital August 6, 1925.

From the literature examined it was found that erection after operation was unusual.

Our impression of this case was that it was one of thrombosis, probably due to constant desire, with frequent erection, without relief.

BIBLIOGRAPHY

Keyes Urology, page 635.
Hinman, Annals of Surgery, Dec., 1914.
Keene's Surgery, Vol. IV.

BENIGN PROSTATIC OBSTRUCTION AND THE RELATION OF ASSOCIATED PROBLEMS TO ITS SURGICAL MANAGEMENT *

By VERNE C. HUNT, M. D.
Rochester, Minnesota

THE DESIRE on the part of the physician to promote longevity has led to scientific investigation of the cause and effect of disease. Preventive medicine had exerted a profound influence on infant and childhood mortality. As a result a higher percentage of children live to adult age to become subjected in turn to the organic disturbances of adults and the aged. Advances in the medical sciences have afforded methods of conferring relative immunity against a number of diseases epidemic in nature and lethal in their effects. Metabolic studies have clarified our knowledge of the effect of disease on vital organs, have established methods of measuring those effects, provided guides in the treatment of disease, and afforded a means of relative prognosis. The end-result or achievement of scientific investigation of disease has not been the prolongation of life beyond three score years and ten, but has instead been the advancement of the average length of life with increasing numbers approaching biblical longevity.

The stresses and strains incident to the pursuit of the duties of life are exerted chiefly

* Presented before the West Virginia State Medical Asssociation, Morgantown, May 26, 1926.

upon the cardiovascular system, justifying the adage "one is as old as his arteries." The renal excretory mechanism, while it possesses large reserve under normal conditions, is directly affected by organic disease of the circulatory system. The sum of the two presents the syndrome of cardiovascular renal disease. This is of prime importance in the consideration of the problems associated with the management of benign prostatic obstruction.

Prostatic obstruction occurs at an age later in life than the usual surgical diseases, and the degenerative changes in the cardiovascular system and renal excretory mechanism incident to that age exert a marked influence on its management. Ninety-five per cent of these patients are more than fifty years of age; 75 per cent are between sixty and seventy-five years of age.

Willius, in a recent study from the cardiovascular standpoint, including electrocardiographic investigation of 705 patients with prostatic hypertrophy, noted the presence of cardiovascular disease in 42 per cent. Orteriosclerotic cardiac disease occurred most frequently. Forty-three per cent presented this type, and 36 per cent the arteriosclerotic type associated with hypertension. Hypertensive cardiac disease occurred in 17 per cent, unassociated with outstanding arteriosclerotic features. Miscellaneous types of cardiac disease occurred in 4 per cent of the cases and included rheumatic endocarditis with stenosis or incompetence of the mitral or aortic valves, myocarditis, and pericarditis. In 8 per cent of the cases angina pectoris was present. Willius concluded that the incidence of cardiovascular disease is higher with prostatic obstruction than with many other diseases during similar decades, indicating that coexisting cardiovascular disease is increased by persistent urinary retention.

In a recent review I noted that, in 75 per cent of cases of surgical benign prostatic obstruction, the residual urine varied from 60 c.c. to the capacity of the bladder, and that the resultant renal insufficiency varied from slight retention to over 200 mg. of urea for each 100 c.c. of blood, when actual or potential uremia was present at the time of admission. The improvement of the cardiovascular reserve coincident with improvement of renal function, following gradual decompression of the bladder and prolonged urethral or suprapubic drainage, is noteworthy in conjunction with Willius' observation of the incidence of cardiac disease in cases of prostatic hypertrophy. I have observed numerous patients of this type, in uremic states and near a cardiac break, return to a fair state of cardiovascular renal reserve, so that they have been operated on safely and successfully.

In the management of prostatic obstruction adequate care must be exercised in estimating not only the effect of urinary retention on the urinary tract but its effect on the organism as a whole. In the early years of prostatic surgery little was known of the effects of prostatic obstruction, no methods had been devised for measuring those effects and no therapeutic means were available for obviating them. However, investigation has resulted in reliable tests of renal function, and experience has taught their application, so that more or less standardized methods have been devised for the more successful management of the patient with prostatic obstruction. In recent years electrocardiographic studies have enlarged our knowledge of the effect of cardiovascular disease on the circulatory system and, in affording the opportunity of measuring to a fair degree cardiovascular reserve, serve as a means of relative prognosis. It is not to be inferred that these methods of determining cardiovascular-renal efficiency and reserve supplant clinical study and observation, but rather that they enhance the value of such observations when used in conjunction with them. Together they increase the certainty with which one may foretell what additional burden these vital organs may withstand.

While the contributions in the medical sciences have clarified to a great extent our knowledge of disease, improvement and refinement of methods have been fostered by the desire to improve results and decrease mortality rate. It was only through the acceptance and application of the principles and teachings of Lister thati ntra-abdominal, intrathoracic, and intracranial surgery became possible and have progressed. Lister presented the first important factor of safety

in the conduct of surgical operations, and surgery has progressed, results have improved, and the mortality rate has been reduced, as the result of refinement of methods, better selection of patients, and the introduction of additional factors of safety. As changes haveoccurred in the management of prostatic obstruction and many factors of safety have been instituted, prostatic hypertrophy with resultant urinary retention has ceased to be an affliction, but has become a readily remediable condition.

In the early years of prostatic surgery the mortality rate of prostatectomy placed stringent limitations upon the indications for surgical removal of the gland. However, the principles of management have become so thoroughly standardized that the risk of prostatectomy may be estimated on the basis of the cardiovascular renal reserve; and it may be stated, so far as indications are concerned, that prostatic enlargement resulting in urinary retention of 60 c.c. or more, or frequency, or both, constitutes a surgical condition.

Modern methods of management of prostatic obstruction forbid immediate prostatectomy. It has been shown that in 42 per cent of these cases cardiovascular disease is present, and in 75 per cent renal insuffiicency is associated, and that careful consideration and adequate preoperative treatment are therefore required. Causes of death following prostatectomy may be classified in three groups: (1) preexisting and coexisting organic disease; (2) surgical accidents, and (3) postoperative complications. Group 1 comprises for the most part renal insufficiency, cardiovascular disease, chronic pulmonary disease, and diabets. The most common causes of death in Group 2 are hemorrhage, shock, and anesthetics. Group 3 includes pulmonary complications, general sepsis, embolism, and peritonitis. Experience has shown that many of these causes of death are preventable. In the early years of prostatic surgery many patients were operated on immediately; urinary retention, due to prostatic enlargement, was regarded and treated as an emergency, and too often prostatectomy was performed without preliminary examination to determine the physical and organic reserveo f the patient. Acute urinary retention at times may not be amenable to other than surgical drainage, but prostatectomy is never an emergency procedure. In most instances the careful passage of a urethral catheter is successful, and the surgeon is thus allowed sufficient time to ascertain the physical status of the patient and to determine by what means and at what time permanent relief may be instituted. In obstructive lesions of the large intestine with resultant toxemia, removal of the lesion is of secondary importance to relief of the obstruction. Likewise, in cases of prostatic obstruction it is primarily important to relieve the obstruction; extirpation of the prostate should be considered only after the patient has recovered from the effects of obstruction and his physical and organic reserve have been stabilized.

In a recent review of ninety-nine cases in which death occurred after prostatectomy at the Mayo Clinic between January 1, 1913 and January 1, 1925, including a study of the postoperative clinical course and necropsy findings obtained in 85 per cent, it was noted that in 50 per cent death was due to preexisting and coexisting disease, that is, cardiovascular renal disease and pulmonary lesions; in 4 per cent it was due to surgical accidents, such as hemorrhage and shock! in 46 per cent to postoperative complications, such as pulmonary complications, general sepsis, embolism, and peritonitis. During this same period suprapubic prostatectomy was performed in 1783 cases at the Mayo Clinic. In 666 of these, since the general condition was excellent and there was little or no renal insufficiency, operation was performed without preoperative treatment. In this group death occurred in forty-four (a mortality rate of 6.6 per cent) contrasted with 680 cases in which preparation consisted of providing a permanent indwelling urethral catheter, with death in twenty-two cases (a mortality rate of 3.2 per cent).

In other words, then, as coexisting renal insufficiency, cardiovascular disease, and chronic pulmonary lesions are directly responsible for death in 50 per cent of cases following prostatectomy and indirectly responsible for many others due to postopera-

tive complications, their treatment preliminary to operation is essential. Since urinary retention, with resultant renal insufficiency and subsequent uremia in cases of long duration, directly affects renal function and secondarily enhances coexisting cardiovascular and chronic pulmonary disease, drainage of the bladder forms the keystone of treatment preliminary to prostatectomy.

Determination of the time at which prostatectomy may be undertaken with safety depends on the amount of rehabilitation possible in the individual case as indicated by various tests. The phenolsulphonephthalein test of Rowntree and Geraghty, and the urea content of the blood are accurate indexes of renal function and relatively easy to conduct and interpret. Estimation of renal function determines the amount of renal damage incident to retention, acts as a guide to the time at which operation may be considered with safety, and assists in making a prognosis for recovery and length of postoperative life. These tests of renal function require repetition at frequent intervals during the period of preoperative treatment to permit of accurate interpretation of the effects of treatment. Except under most unusual circumstances preliminary treatment should be continued until the reactions to the renal functional tests have become stabilized within or near normal limits. It is only through the employment of these tests that the time may be accurately determined at which operation may be carried out with the minimal risk. Electrocardiographic studies in conjunction with clinical investigation of the cardiovascular system have become a routine in the determination of the status of the patient with surgical prostatic obstruction.

So far as the surgical approach to the prostate is concerned, it remains in most instances a matter of personal choice. With the improvements in the surgical procedures, the ultimate functional results of the perineal and suprapubic operations have been equally good when performed by those skilled in the respective methods. Until recent years the perineal operation has probably been accompanied by a lower mortality rate than the suprapubic, as a result of the modifications contributing to its safety presented by Young, Geraghty, Hinman, andothers. On the other hand, suprapubic prostatectomy has recently been modified and provided with additional safeguards so that there is now little to choose between the two methods from the standpoint of ultimate functional results and mortality rate.

In the evolution of suprapubic prostatectomy it was a common observation that patients who had survived simple cystostomy for relief of retention or removal of vesical calculi, and had recovered from the depression, subsequently underwent radical removal of the prostate gland with a relatively low mortality rate. This gave impetus to the two-stage operation, which is as yet indispensible when there are associated vesical lesions, severe cystitis, marked renal insufficiency, senility, intolerance to urethral catheter, and trauma of the urethra. Prostatectomy simultaneous with removal of large vesical calculi and excision of large diverticula in the presence of marked cystitis is accompanied by a higher mortality rate than the two-stage operation. The two-stage operation is necessary in certain cases to insure the minimal risk, but that it deserves adoption as a routine is questionable. Excellent drainage of the bladder is facilitated through permanent urethral catheterization in most instances and limits the surgical procedure to one operation, which permits exposure, visible conduct of the operation, and accurate hemostasis, so necessary to the best functional results and avoidance of surgical accidents. Employment of the method of gradual decompression, as described by Von Zwallenburg, has often obviated the necessity for preliminary cystostomy.

In our selection of patients during past years, the mortality rate of the one-stage operation was lower than that of the two-stage, by virtue of the better general condition of the patients selected for this method; and the mortality rate following the two-stage operation would have been lower than it was had the latter been employed as a routine in all cases. However, as approximately 75 per cent of patients when carefully selected may be satisfactorily prepared and operated on by the one-stage method with relative safety, the diluent effect on mortality

rate is an insufficient reason for employing the two-stage operation as a routine. Whatever the various opinions regarding the one-stage and two-stage procedures, drainage of the bladder by urethral catheter or cystostomy permits recovery from renal insufficiency and stabilization of renal function, and decreases the stress on the cardiovascular system and respiratory apparatus.

The necessity for preoperative preparation in all cases is apparent, and successful management of prostatic obstruction demands drainage of the bladder preliminary to prostatectomy for at least ten days, often for longer periods. This has recently been accomplished by permanent urethral catheter, and has been followed by the one-stage prostatectomy under direct vision in 80 per cent of the cases.

The adoption of this principle of management in all cases has resulted in removal of the prostate gland in 255 cases at the Mayo Clinic during 1925, with death in only six, a mortality rate of 2.3 per cent.

DISCUSSION

DR. F. E. ROBERTS, Wheeling:

The society is certainly indebted to Dr. Hunt for coming this long distance to give us his methods and his results from this large series of cases. He is certainly right in that the cardiovascular-renal syndrome is the important factor to be considered. Prostatic cases usually come in with acute retention. These cases, after coming in with retention of perhaps 24 to 48 hours, with the urethra traumatized and the patient in a state of shock, are just as much a surgical emergency as a perforated gastric ulcer or a ruptured ectopic and demand just as much care. This condition has perhaps persisted for years, and often the cases are at the point where even a cystoscopic examination may throw them out of balance and they will become serious cases.

I should like to mention some of the important things in the preparation. These patients come in after having perhaps for many years been unable to sleep more than one or two hours at a time and are simply worn out physically. Whatever method of preparation is begun, the object should be to get these patients somewhere near normal. Whether it be ureteral catheterization or something else, get them near normal, so they are sleeping well and eating well. Of course, during this period the kidney function will improve, the urea nitrogen will lessen, and the phenolphthalein will show a distinct improvement.

I wish Dr. Hunt would give us more in detail his method of relieving pressure and tell us whether he has found X-ray treatment of any benefit in preoperative care. It is said that in some cases preliminary irradiation will reduce congestion and make the operation less severe.

DR. ALBERT E. GOLDSTEIN, Baltimore, Md.:

I am very much interested in the question of prostatic hypertrophy, and I really believe we should consider it a special privilege to have heard this paper of Dr. Hunt's. I am very well acquainted with his work at the Mayo Clinic and have watched it very carefully at my visits there. I believe, as he mentioned (and I am in accord with his methods), that we should lay special stress on the cardio-respiratory system. I do not know whether he called attention to one point —that is, after they insert a retention catheter, whether they keep the patient with a cardiac condition in bed or not. We are accustomed, whether there is a cardiac condition or not, to get them up out of bed to prevent any pulmonary stasis. We have found that some pulmonary stasis is likely to set in before we get them in condition for operation.

We lay more stress on the stabilization of the blood urea than functional tests. By stabilization, I mean that an individual may come in with the urea within normal limits, his second urea may be within the same limits, we do not feel that he is ready for operation at that time. He should have at varying intervals, of three or four days' duration, several ureas below 60 milligrams, if possible. In fact, several years ago, in a series, we found that if there is a pre-operative urea below 100 milligrams and there was or was not a descent of the urea, but remained stationary below 100 mgms, that that individual was a perfectly fair risk; but an individual with an urea of 30 or 40 mgms,

gradually ascending to 60, was not a safe risk, even though he was below the high standard for urea. This was gradually ascending and we knew not how high it was going to.

I believe we stress too much on mortality statistics. The Mayo Clinic reports 3.4 per cent; Deaver reports 3.9 per cent. One man does it by the suprapubic method; another uses some other method. I think what we ought to begin to talk about now is morbidity. What is the condition of that patient after he has had a prostatectomy? He has been discharged; he did not die; but what is the condition of his urinary apparatus; what is the condition of his cardiac apparatus? Has he control of his urine? Has he dribbling? Has a stone formed? I think morbidity is of more importance today than mortality, for it makes very little difference, I think, whether you have a mortality of 3.4 or 3.9. If a man does a suprapubic better than a perineal, I think he should do the suprapubic; if he does perineal better than the suprapubic, I think he should do the perineal. Since the introduction of caudal anesthesia, not spinal, many men use the perineal method. With that method we have been able again to reduce the mortality rate, first of all because the patient is not given a general anesthetic, so we have been able to remove the 1 or 2 per cent of postoperative pneumonias. We have never had postoperative pneumonias since using caudal anesthesia.

One of the serious complications we have had, not causing death, but causing serious discomfort, is postoperative epididymitis. Most authorities quote 20 per cent of postoperative epididymitis; one 19 per cent; one 16 per cent. As a matter of fact, one man in England reported 82 per cent of postoperative epididymitis. At a meeting of the American Urological Association, this year, I have reported tying off the vas on each side and resecting a portion of it. In a series which I did, in 25 cases in which I did ligate the vas, epididymitis did not develop; and in 25 cases in which I did not ligate the vas it did develop in 20 per cent of cases. Very frequently the complication of epididymitis in a man 75 years of age may result in his death from the standpoint of wearing him out.

DR. G. G. IRWIN, Charleston:

Dr. Hunt's paper is a demonstration of a statement that he has quoted on another occasion, that the removal of the prostate is only an incident in the treatment of a prostatic obstruction. It is the obstruction for which we operate, but it is the patient for whom we are concerned.

One point Dr. Hunt did not mention is the urinary output. We like to see at least 2000 c.c. per day. There is no contraindication to intravenous fluid, if the patient can not take it by mouth, even in heart complications.

We have had some experience in Charleston with gradual bladder decompression. This entails an indwelling catheter as usually practiced. These patients have a large amount of residual urine, which it is not safe to empty at once. You have to empty it gradually. These patients are old and get very, very irritable. They will be restless and thresh around at night, pull out the catheter and do exactly what we have been trying to avoid—literally drain themselves to death.

We have heard much spoken of two-stage operations and one-stage operations. As a matter of fact, these are all two-stage operations. The first step, with cystotomy or without cystotomy, is drainage.

Dr. Hunt quoted figures showing that his mortality in the group classified as "good" was higher than in the group classified as "moderately good." The difference, of course, was that in the group classified as good they were not drained. The moral is that all need drainage, if there is residual urine.

DR. HUNT, closing the discussion.

Of course, in a paper on the subject of prostatic obstruction, there are so many angles and so many features of the problem that a person could speak quite at length. I did not wish to take them all up, however, I am glad the discussion has precipitated some of these problems.

So far as the detailed management of gradual decompression is concerned, I think we are very deeply indebted to Von Zwallenberg, of California, who first perfected this method. We know that acute uremia and death have been precipitated by the sudden

emptying of an overdistended bladder, so his method was very acceptable at the time. The method consists of introducing a urethral catheter without allowing any urine to escape, the patient lying flat in bed. A long tube is attached to the catheter which drains into a receptacle at the foot of the bed. That receptacle is elevated to such an altitude that the urine is emptied from the bladder at a rate but little faster than that at which it enters the bladder. Generally it requires about three days to entirely empty the bladder by this method. During that period, we keep the patient flat in bed.

Regarding Dr. Roberts' question about X-ray, we have used both X-ray and radium in benign prostatic hypertrophy. While it has aided somewhat in shrinking down the gland, yet it does not relieve all the symptoms, and in all the cases in which we have used radium or X-ray to date, it has been necessary to perform subsequent prostatectomy.

I heartily agree with Dr. Goldstein about the stabilization of the renal functional tests. To operate while the renal functional tests are fluctuating is certainly inviting disaster. The question comes up, what do we mean by stability? For instance, there are times when we may operate on a patient—with a blood urea of 50. Usually we demand that the blood urea remain at a stable level; if it goes down to 30, that it remain at 30. However, we all have seen patients come in with marked renal damage, high degrees of renal insufficiency, high blood ureas, and have done a decompression. In some of those patients we realize it is better to do suprapubic drainage upon them and let them go home, because it may be a matter of months before they are able to stand prostatectomy. We have had some of those patients return eight or twelve months later with blood urea getting no lower than 50 to 60 milligrams per 100 c.c. of blood. While we desire a lower level, yet that patient has been on drainage for months, appetite good, general condition good; and if his blood urea is stabilized at 50, I think we can operate on him safely. It is the stabilization that is important.

Dr. Goldstein said he had no evidence of rate. But determining the incident of epi- postoperative respiratory complications, particularly pneumonia, since the advent of abdominal block, or sacral anesthesia. I agree with him that we have not seen so many, but we have not yet been able to eliminate entirely the pneumonia which is embolic in origin, which is distinct from the type of pneumonia we used to see, which was inhalation in type.

I am glad Dr. Goldstein spoke of the incidence of epididymitis, because we have to bear in mind that patients with prostatic obstruction may have epididymitis without any instrumentation or urethral catheterization. I have seen epididymitis occur following suprapubic drainage without urethral catheterization; I have seen it, in years gone by, in cases where no preparation whatever was undertaken. Ligation of the vas is a procedure about which there is a good deal of difference of opinion. I am glad he quoted the figures of various men. I think the man who presented results of 80 plus per cent of postoperative epididymitis was somewhere near correct, although that is rather high. But are we considering as postoperative epididymitis only those that come on in the hospital or those that come on in eight, twelve, fifteen or eighteen months thereafter? I should say that man who has 50 per cent of epididymitis in the hospital has too high a didymitis three months, six months, twelve months and eighteen months after operation, our incidence was 52 per cent; while it was only 20 per cent in the hospital. So when one talks about postoperative epididymitis, I think he should designate whether it occurs in the hospital or after the patient goes home. The question might be asked whether late epididymitis is due to operation. I think it is. Some men claim they do no damage at all to the ejaculatory ducts in removing the prostate, but I think it is almost impossible to remove an adenomatous prostate without doing some damage to them. The scar tissue formation with retention in the vesicles, and ascending infection, I think explains the occurrence of epididymitis late after operation.

I appreciate very much the discussion of my paper, and I wish to express to the president and officers of the West Virginia State Medical Association my appreciation of the privilege of appearing before you.

FOCAL INFECTION AS AN ETIOLOGICAL FACTOR IN UROLOGICAL CONDITIONS *

By G. G. IRWIN, M. D.
Charleston, W. Va.

THE SUBJECT of focal infection, of course, is not new. Its relation to hypertension, chronic endocarditis, chronic arthritis and other conditions is part of every physician's working knowledge. Nor is the connection between focal infection and urology new. It is given at least passing mention in most current literature and text books. Nevertheless, the subject is temporarily behind a cloud of printer's ink while the profession chases gaily from one new urinary antiseptic to another.

When a patient comes to a physician complaining of frequent painful urination, if pus is found in the urine, and the urethra and prostate can be eliminated as its source, the chances are greatly in favor of the condition being cystitis or ureteral stricture, or calculus or pyelonephritis (or a combination of any or all of these). Symptomatically, especially when the condition is chronic, there is but slight chance of the diagnosis being made without a urological examination. The limit of diagnosis in the absence of this examination is the determination that there is an infection of the urinary tract.

This, in itself, is no insignificant diagnosis —it implies several other facts, just as occurs in the diagnosis of hypertension, chronic arthritis, etc. It is well known to all of you that the urinary tract is well protected from the direct access of infection; that the kidneys are constantly excreting bacteria from the blood stream and still maintaining a healthy condition; that the undamaged bladder is incapable of being infected. In other words, the urinary tract is adapted to escape infection. The presence of bacteria is not enough, we must have what Hugh Cabot has called the prepared-soil. Expressed otherwise we need a local preparation or predisposition to infection—a locus minoris resistenciae. Briefly, this results from anything causing urinary stasis or congestion of the urinary tract, for example obstructions, sexual abuses, toxins, drugs, injuries, etc. (Hunner emphasized the importance of these before this meeting last year.) These factors, for the most part, are those which the urologist will be called upon to manage.

The soil having been prepared by those conditions we have just mentioned, the seed —the infection—is supplied usually through the blood stream. The sources are many but except those infections that follow as a result of the acute infectious fevers, we look to the old stand-bys, teeth, tonsils, sinuses, prostate, etc., for our focus of infection.

Another approach to the subject is from the standpoint of elective localization of bacteria. It is now well over ten years since Rosenow first published his work on this subject but belief in his findings has gained ground but slowly. As two of my cases show, it is often worthy of serious consideration. Briefly stated Rosenow's findings were that certain strains of streptococci (and it has since been found that some strains B. Coli possess like traits) found in septic foci have an affinity for particular tissues, and produce disease in these tissues. For example: the injection into healthy animals of streptococci from the urine or from about infected teeth of persons having calculus has been found to result in calculus formation in the animal. Dr. Klump, of Huntington, gives a very interesting account of the relation of focal infection to peptic ulcer in the current number (May) of the *State Medical Journal.* Elective localization explains to a certain extent the formation of some urinary calculi—and some recurrences. It apparently also explains

* Read by title in the fifty-ninth annual meeting of the West Virginia Medical Association at Morgantown, May 27, 1926.

the causation of some cases of cystitis and of ulcerative cystitis. I have sometimes wondered if it might not explain why so many strictures occur in the lower third of the ureter. Where elective localization of bacteria is operative, local damage is apparently not a necessary antecedent to infection. However, whether the underlying damage is due to elective localization or otherwise, most chronic urological conditions present the combination of some obstruction to the urinary stream plus a blood borne infection.

The diagnosis of urinary tract infection, therefore, gives direction to the clinical efforts: (1) to remove probable foci; (2) to correct local predisposing causes in the urinary ttract.

It has been my experience that most infections are found about the teeth. Dental examination is not part of medical practice, but we must know when the dentist has made a worth-while examination of these cases. The fact that the patient has had no toothache means nothing, neither does the statement that "the dentist has just gone over my teeth." Too often that is just what the dentist has done—gone over them—transillumination and X-ray may show from one to six infected roots. I hold all crowned and devitalized teeth suspect.

The prostate is another interesting focus. Prostatic massage or the passage of an instrument over the prostate is frequently followed by chills, fever and pyuria. This is the well known urethral fever, and is the condition present when the urologist is wrongfully accused of having infected the patient. The explanation is that some infectious material from the prostate has been taken into circulation and has set up an acute pyelonephritis. I believe that in most of these cases there has been present a latent infection in the kidney.

In taking the history of these patients I have learned to expect a certain sameness as to the course of their condition. They are prone to state that their illness is one of relapses and remissions; that while never entirely well they are reasonably comfortable much of the time, but any little insignificant ailment, such as a sore throat, a cold, or a chilling causes an intensification of their complaint.

From what has been said, it might be assumed that all that is necessary to cure these urological conditions is to pull out diseased teeth, have the cases cystoscoped and all will be well. A surprisingly large number of cases will respond that way, it is true, but the number that will not is perhaps as large. It is often the case that the focus cannot be found; or that the focus found and removed has no effect, or that there are several foci in different parts of the body. My contention is that focal infection plays an important relation to the existence of chronic urological conditions and that more effort spent on removing it and less on trying the next urinary antiseptic will result in the greater good to the patient and the more credit to our profession.

In conclusion I wish to present four brief case histories.

Case 1: Man 36—had his yearly physical examination about December 1 last year. Teeth gone over at that time. Pronounced in perfect health. Two weeks later, sudden onset of synopsis of urinary infection. Urological examination showed bilateral pyeolnephritis (apparently of long duration) cystitis, posterior urethritis and prostatitis. Investigation of teeth the next week resulted in the removal of six for apical abscesses. This case was later given intravenous mercurochrome by a prominent urologist in an eastern city and was sent home as cured. Later had an exacerbation which subsided without treatment. Prostatic massage and cystoscopy were promptly followed by a flare-up. He is still being treated for the same condition, his ureters have been widely dilated, but the prostatic condition has not cleared up. This case is cited to show that removal of foci about the teeth is not always the whole story, that the prostate is sometimes at least a contributory cause.

Case II: Married woman, 24. Stricture of the ureter, normal urine. Complaint, pain in the left flank. Dilatation always gave relief. Relapses many. Infected tooth removed, as well as an inpacted one. Little if any improvement. Throat had been passed upon by several specialists, treated, no result.

While on a vacation developed an acute tonsilitis, for which tonsillectomy was done later. Exacerbation of pain, needing dilatation of the ureter. Well during the next six months. Previously longest period without trouble was four weeks.

Case III: Married woman, 37 years old. Complaint: intermittent frequent, painful urination for past fourteen years. Had not menstruated for past five years. Cystoscopy showed an herpetic cystitis. Search for focal infection negative. X-ray of teeth negative. Local treatment gave no improvement. An intravenous injection of mercurochrome had no local effect, caused one tooth to become sore. Reinvestigation showed suspicious area at the root. Removal cleared up the bladder symptoms immediately. She also menstruated a bit a month later.

Case IV: Case of ulcerative cystitis. Very contracted bladder. Thought to be TB in spite of many negative searches for the tbc. Too acutely ill to permit of any satisfactory cystoscopic examination even under general anesthesia. Given irrigations, instillations, intravenous mercurochrome, hexyl resorcinol etc., all without more than a passing improvement. Had a mouthful of gold teeth of which she was very proud. Finally prevailed upon her to have them examined and all were removed as diseased. Her bladder condition cleared up magically. When seen three months later, the bladder was healed but contracted; the upper urinary tract was normal.

URETERAL OBSTRUCTION *

By E. P. SMITH, M. D.
Fairmont, W. Va.

I MUST FIRST APOLOGIZE for the title of this paper and the unscientific grouping of entirely different diseases under one head. Ureteral obstruction is not a distinct clinical entity in itself, but a result of many different morbid conditions, several of which are now well known and recognized clinical entities. My only excuse is that the clinical signs and symptoms of ureteral obstruction are, up to a certain point in examination, the same and the sequalae or end results are also the same. We have a patient who on the ordinary clinical examination shows evidence of back pressure, urinary stasis or infection and we then resort to the more specific urological examination which includes cystoscopy, ureteral catheterization and pyleography. Then and then only are we able to determine which one of these conditions is causing the obstruction. It is not my purpose tonight to try to mention every cause that has ever been known to cause uerteral obstruction but to take up and discuss briefly the more frequent and important causes that should concern every one doing a general medical or surgical practice.

Urology has made wonderful progress in the last few years, and many former obscure conditions have been cleared up and their diagnosis and treatment is now on a firm scientific foundation. It is also true that some men are too enthusiastic on this subject and are finding entirely too many lesions. The men who practice among, or I might say of some, prey upon that class known as neurasthenics, particularly women, and in the past removed their tubes and ovaries, fixed the uterus and dilated the cervix are now turning eagerly to urology, females only. It would seem that the available supply of women without ablated tubes and ovaries and fixed uteri is now exhausted and they are beginning all over again on their urinary tracts. However, I am glad to say that many of these neurasthenics are actually being relieved and cured by cystoscopy, and as the operation is harmless if done with ordinary care and skill and attended with so little pain, particularly in those cases without urinary lesions, that I am sure a great deal of good is being done and very little harm.

Ureteral Obstruction

The ureters are two fibro-muscular organs

* Read before the Tri-County Medical Meeting at Clarksburg, April 1, 1926.

lined with mucous membrane and having but one function, that of conveying the urine from the pelvis of the kidney to the bladder. They are about twenty-six to thirty cm in length, the left being slightly longer than the right and both longer in men than in women. Histologically, they resemble the bladder in having three coats; an outer sheath of loose fibrous tissue, a middle coat of involuntary muscle, and an inner coat of mucous membrane. Like the bladder and kidney pelvis they are capable of being enormously dilated. The caliber varies from the size of a No. 6 French catheter to a size No. 30 (lumbar and pelvic spindles). There are four well defined levels at which the lumen is narrow and three where it is wider. The first of these constrictions is at the junction of the kidney pelvis and ureter; the second at the crossing of the iliac vessels; third in the broad ligament; fourth in the wall of the bladder. These constrictions are formed by thickenings of the muscular coat and between them are three dilatations known as the lumbar, upper and lower spindles. They have regular peristaltic movements like the intestines, from above downward, delivering urine to bladder at regular intervals.

Causes

The ureters being a long easily compressed and movable tube and in close relation with many important organs it is often obstructed by diseases or abnormalities of these organs, but it is also probably more often obstructed by diseases within itself.

Among the causes must first be mentioned stricture of the ureter. Stricture of the ureter is an intrinsic narrowing due to inflammatory diseases of the ureteral wall and, like stricture in other hollow viscera causes a partial or complete block at this point. It occurs at the levels where the ureter is normally narrowed. It is one of the urological diseases that has been thoroughly worked out lately and is now considered a distinct entity. It occurs at any age and is often bilateral. It is also one of the most common lesions within the abdomen, and while it may not be as common as some would have us believe, it is so common that its existence cannot be ignored by any one having to deal with abdominal lesions. It is certainly so common that we are overlooking or missing a common disease, if we fail to find it occasionally. There is a middle sensible ground between the two extremes on the one hand, the man who denies the occurrence of such a thing; on the other hand, the man who finds it in every case he examines. Recently several cases have been in the literature as congenital.

While it does occur in the very young, the greater majority of cases occur in adult life and are caused by an inflammation produced by the commoner pyogenic cocci, the gonococcus being the rarest and the streptococci and staphylocci the commonest in the beginning with a secondary invasion by the colon bacillus. The tubercle bacilli also play an important role. Like other strictures the condition is progressive, earlier in the course causing irritable bladder, backache, vague digestive disturbances and intermittent low grade uremic conditions. These are the kind of cases that are often classed as neurasthenics and treated for everything under the sun but ureteral stricture. Later when it becomes smaller and symptoms are more localized the condition if on the right side is often mistaken for gallbladder, appendix, tube or ovarian lesions. One prominent genito-urinary man said years ago, that he never got a case of ureteral obstruction on the right side until after the patient had had his gall bladder and appendix removed and in addition, if it was a female, tubes and ovaries. Still later in its progress when hydro-ureter, hydro-nephrosis, pyelitis and pyonephrosis supervenes the diagnosis is more easily made. While it can safely be said that stricture both in infants and adults sooner or later causes pyelitis from urinary stasis, it cannot be said that pyelitis is always caused by ureteral obstructions. There are undoubtedly cases of pyelitis more rare in adults, more common in infants where stricture or any other form of obstruction is not present. These are the kind of cases of pyelitis which do improve under medicinal treatment but in my experience they are rare. It is to be noted that several cases classed as essential hematuria have later been proven to have had stricture of the ureter.

Ureteral Kinks, Augulations and Torsions

On account of the ureter's close relation to the other abdominal organs it is often subject to kinking, angulations and torsions. The two principal points where kinking and angulations are found are at the upper and at the lower ends; those at the upper end being due to a displacement of the kidney; and those at the lower end due to the disease of the pelvic viscera, particularly in the female. Torsion is due only to a movable kidney. It is certainly not true that all cases of movable kidney cause ureteral obstruction, but it is equally true that many of them do. The operation of nephropexy has lately fallen into disuse because it did not relieve the symptoms in enough cases. But this is because many movable kidneys are not causing urinary stasis or interfering with the circulation of the kidney. If urinary obstruction can be proven then the operation will be successful. The upper 4 or 5 cm of the ureter above where it crosses the spermatic or ovarian vessels is very movable and this crossing point is where angulation, kinking and torsion takes place.

The symptoms from this condition are intermittent like stricture but are apt to be more acute and severe and the sequelae—hydroureter, hydrenophrosis, pyelitis and pyonephrosis are the same as stricture. The obstruction at the lower end usually occur in or near the broad ligament in the female. Pelvic inflammatory conditions, tumors, cysts by pressure and extensive pelvic operations may all be mentioned as causes. That common pelvic lesions, pus tubes is seemingly not one of the offenders.

It has long been known that a rather mild type of ureteral obstruction accompanies chronic appendicitis or that condition classed or diagnosed as chronic appendicitis. This occurs just above the pelvic brim in the cecal mesentery. It is due to a short cecal mesentery which when the cecum becomes ballooned up with gas, pulls the underlying ureter laterally, thus causing an angulation. Two cases have recently been reported in *Surgery, Gynecology and Obstetrics* by Hepburn where this condition was relieved by transplanting the ureter laterally so that it no longer runs underneath the cecum.

Pregnancy

There is another form of ureteral obstruction that should be mentioned that occurs during pregnancy. This is caused by pressure from the gravid uterus and occurs at the pelvic brim. Some observers believe that the stasis is produced by downward displacement of the bladder with subsequent kinking of the ureters at the pelvic brim. The pyelograms show the hydro-ureter to begin at the brim. Of course this condition cannot occur until after the fourth month. Hydro-ureter and pyelitis do occur infrequently before the fourth month, then of course the stasis could not be brought about by the impingement at the brim.

Calculi

Impacted stones in the ureter may cause urinary obstruction varying in degree from complete blocking where a large stone suddeny becomes impacted at a narrowed point, to those cases where a smaller stone lodges in a dilated portion and remains for years causing very little or no back pressure. Ureteral stones are primarily renal and are formed in the calices as a result of stasis and infection. Urinary stasis does not always produce stones, but it is an important factor. It is suggestive that both stricture and calculi are frequently bilateral. Infection especially by staphylococci is of equal importance. Urine loaded with staphylococci should at once make you suspicious of the presence of calculi along the urinary tract. About 80 per cent of stones lodge in the lower third of the ureter. Where a stone has been impacted for years the inflammatory condition set up in the wall of the ureter later when the stone has passed may become a stricture. While most of the calculi which start down the ureter, pass spontaneously into the bladder or can be made to by cystoscopic manipulation or if they lodge, can be successfully removed by open operation, it would seem wise not to expect too large a stone or too many medium sized ones to pass through on account of the damage to the ureter and danger to the kidney. Calculi are rather easily removed from the pelvis and is often less dangerous

to remove a stone by a nephrotomy than trying to coax it through the ureter.

There is another rare condition which I wish to mention simply because I have happened to encounter one case. This seemed to be a narrowing of the lower orifice of the ureter by a sclerotic band in or just under the mucous membrane. This patient was a woman aged 34 years, the mother of seven children, was underweight and nervous, and had had backache and frequent urination for years. She had also had an attack similar to this about ten years before. This attack came on suddenly with pain over the left kidney region, frequent urination, vomiting, fever and anuria. When I saw her she had not passed any urine for 24 hours. The bladder had been catheterized repeatedly but was always found empty. When I cystoscoped her the bladder was empty, and normal, except around the two ureteral openings. The right ureteral opening was a very small dimple like, and the smallest catheter with a stylet would not pass. On the left side there was a large tense oval swelling about the size and shape of an orange with the small round ureteral opening on its apex making it very difficult to insert a catheter. A No. 6 filiform pointed catheter was introduced. Immediately on passage of catheter through the orifice there was a discharge of milky urine both through and around the catheter. We collected 400 cc. of urine through the catheter and certainly that much escaped around it. The woman was almost instantly relieved of pain. The catheter was inserted 20cm. and left, patient put to bed and catheter left in place two days. At this time it was removed, but had to be replaced within 8 hours on account of anuria again. This time the condition was the same but so severe and after emptying the left ureter and pelvis through a No. 8 catheter a pyelogram was made which showed an enormous dilation of the left ureter and pelvis. This catheter was left in situ for two days and again removed. Within ten hours she had obstruction again. This catheter was replaced and left eight days. I might say here that this was a radiograph catheter as I had found on the one I had left in for two days had become so encrusted with urinary salts that its removal was painful. When we removed the catheter this time the patient remained symptom free for two days, when the condition recurred. Through the cystoscope with a small pair of bladder scissors an incision was made through the ureteral orifice backward between the ureter and bladder about 1.5 cm long. This immediately relieved the obstruction. She has had no recurrence in eight months and says she is in better health than she has been for years. The condition around the left ureteral orifice seemed to be a formation of a dense sclerotic band and was certainly not a ureterocele. Since having this case I have found one similar reported a few years ago by Kelly, who relieved the patient by making the incision the same as I did. We were never able to catheterize the right ureter and there was certainly no urine coming from it. It would seem probable that the similar attack she had ten years ago had entirely destroyed the right kidney. It seemed probable that the cause of this obstruction was a stricture around the orifice from some ulceration and later contraction of the bladder mucosa.

Symptoms and Diagnosis

It is impossible to try to take up the symptoms and diagnosis of all the conditions I have mentioned in this paper. However there are a few that I would like to note briefly. There is a progressiveness about all the lesions causing urinary obstructions such as, a general or focal infection within or without the tract causing a mild stenosis with vague indefinite symptoms which at this time can only be diagnosed by cystoscopy and ureteral catherization. Later the stricture becomes more sevre, th obstruction greater, hydroureter, hydronephrosis, pyelitis, pyonephrosis and stone are added to the picture in increasing severity. Then the symptoms are mores evr and definite, pain varies from a mild intermittent backache of a low grade obstruction to that most severe accompanying its sudden impaction of a stone. The pain is often referred from the point of disease, and early is not accompanied by local tenderness. In the more acute obstruction tenderness is very marked over the ureter and kidney. Frequent urination and nocturia is early and present in most every case sooner or later

If urethral and gynecological conditions can be eliminated, the bladder irritability and inflammation can almost be proven to be caused by lesions above. Abnormalities of the urine are usually present, but Cabot states that in stricture with only a mild obstruction, it is negative in over half the cases. As conditions progress sooner or later are found albumin, red and white blood cells. Red blood cells in the urine in any number should be regarded as pathological. Both red and white blood cells persistently in the urine in even small numbers should indicate the necessity for a thorough cystoscopic examination. Since a cystoscopic examination is a simple and harmless procedure it seems to me to be indicated in every case of obscure abdominal pain not othrwise positively explained. and in every case where blood and pus are found in the urine, and in every case of cystitis or frequent urination which cannot be proven to be due to urethral or some gynecological condition.

GOITRE *

By R. RICHARD RENNER, M. D.
Cleveland, Ohio.

NO APOLOGY is made for speaking on the subject of goitre. Enlargement of the thyroid has been the object of attention from the earliest times. It was mentioned by the Hindus in 2000 B. C. and the early Greeks treated goitre by the internal administration of the ash of the burned sea sponge, not knowing that the substance was rich in iodine. Caesar mentions the frequent occurrence of big neck as characteristic of the Gauls, and the term Cretin originated when the Romans called the myxodematous idiots Christians. In 1493 Paracelsus wrote about goitre and cretinism and since then many others have written on the subject, until today there is an immense volume of literature, but with it all I believe there is no common disease over which there is more confusion as to the prevention and treatment.

Goitre Districts

The extent of goitre throughout the world is not realized until we remember that all the great mountain chains, plateaus, and areas far removed from the ocean are endemic goitre districts. In each of these districts are areas where, as McCarrison states, it is difficult to find a man, woman or child, who is not suffering from goitre.

In the United States we find goitre in the mountainous districts and in the Great Lakes basin. In Massilon, Ohio, two girls out of every five in high school have goitre. The same is true to a lesser extent in Cleveland and other Great Lake cities. It has been estimated that 40 per cent of the dogs in Cleveland have goitre. In 1917 and 1918 it was found that large numbers of men from the Great Lakes region had goitres and 11 per cent was reported from men of the State of Washington. In 1913 Clark examined children in eleven counties of West Virginia and found 9 per cent to have goitre. In Huntington he found 50 per cent of the girl students affected, and there are still cases in West Virginia as shown by the fact that at times there are as many as one-third of the patients in the Cleveland Clinic Hospital from West Virginia.

Physiology of the Thyroid

I have nothing to add to the anatomy of the thyroid but I believe we need to enlarge our ideas concerning the physiology. We have learned that it is a vital organ, at least without it there is no stimulus on the part of the organism to enjoy life. It is deserving of its blood supply, being the most vascular organ in the body. In proportion to its weight the thyroid receives twenty-eight times as much blood as the head. It is known to be five and one-half times more vascular than the kidneys. Like the brain all the

* Address delivered before Mercer County Medical Society June 24, 1926.

blood passes through it every hour. This vascularity is often discovered at operations. It has caused the belief that the thyroid hormone is regulated more by the blood supply than by the nerve control, and in 1916 Manley and Marine after making two hundred and eighty-nine auto-thyroid transplants concluded that they take and grow and are capable of sustaining life without the presence of nervous control. This does not mean however that the amount of secretion is not controlled by the nerves, as we have seen in the Cleveland Clinic Hospital following ligations where the artery was not found, or where a small branch only was ligated, a remarkable improvement in cases of hyperthyroidism, which was out of all proportion to the dimunition in blood supply.

Colloid is the iodin containing substance of the thyroid gland. At times of active secretion when special demand is made for the hormone, as in menstruation, pregnancy, mental disturbances and infections there is an increased blood supply and a gradually thinning of this colloid material and entrance into the lymph spaces. Thus the activity of the gland is indicated by the amount of parenchymatous hyperplasia and the amount of secretion in the lymph spaces. The amount of colloid is in inverse proportion to the activity of the gland.

In 1895 Bauman discovered that iodin was a normal constituent of the thyroid. In 1901 Oswald showed that the iodin is found with the globulin and is contained for the most part in the colloid. Marine has shown that as soon as this store of iodin in the thyroid falls below one-tenth per cent hypertrophic and hyperplastic changes begin.

The next big step was the isolation in 1914 of thyroxin by Kendall. This is a crystalline substance containing 60 per cent iodin. It possesses all the properties of dried thyroid extract but is one thousand times as strong. When injected into a dog it causes after 24 to 36 hours restlessness, increase of temperature and pulse rate, and if the injections are repeated there is a distinct tremor, loss of weight and severe diarrhea. Kendall believes this action to be directly on the cells themselves as a catalytic agent, stimulating the internal respiration and thus increasing the metabolism, and all other signs and symptoms are secondary to this increase in metabolism. As a therapeutic agent however we must still rely on the dried thyroid gland because thyroxin is capable of bringing about violent reactions in persons needing thyroid extract.

Thus from the biochemical standpoint the thyroid has one function. That of extracting and storing iodin, manufacturing into thyroxin and supplanting the cells of the body with this hormone. But from a clinical standpoint we might say that through its thyroxin, it makes possible practically all mental and physical activity of the organism and without it life is a living death.

In this manner then the thyroid is concerned with (1) metabolism, (2) circulation, (3) detoxication, (4) interglandular equilibrium and intellectual and emotional stability.

Metabolism

When the gland is normal—the anabolism and catabolism are both going on but are maintained at equilibrium. A deficiency of thyroid extract decreases the metabolism while a surplus increases the basal metabolism. One extreme is shown in cretinism and myxoedena while the other is shown in hyperthyroidism.

Circulation

It has been shown repeatedly that the thyroid in relation with the adrenals assists in governing the heart's action, vascular tone and blood pressure. The tendency toward erythema, dermatographia, hyperidrosis and vasomotor instability are among the earliest signs of hyperthyroidism.

Detoxication

Many have made the observation that removal of the thyroid removes the bactericidal properties of the blood, causing the blood and urine to be more toxic and the animals less resistant to infection, all of which can be remedied by the giving of thyroid extract. Many clinicians have found that thyroid extract promptly and favorably influenced both auto-intoxications and infections.

Interglandular Equilibrium

There is a great mass of evidence to show

that the thyroid is related to the other glands of internal secretion. The sensitiveness to adrenalin in hyperthyroidism has been made the the basis of the Goetsch test. Many workers have written about this relationship, and there is undoubtedly a relationship, but the facts are so clouded that we can say with Cannon that, "in the presence of these complexities one has no idea of thyroid influence on supra-renal function.

The relation of the parathyroids is shown by the improvements in parathyroid tetany cases following administration of thyroid extract which we always give, but what the relation is remains to be proven. Dr. Crile has not confirmed the findings of other men that in many goitre cases there is an enlarged thymus. Several writers have reported hypertrophy of the pituitary following thyroidectomy. Thyroid extract has been used in cases of nephritis as a diuretic and Percy urges the use of thyroid extract as a preparation for operation in patients suffering with a complicating nephritis. The diarrhea with increased gastro-intestinal secretions in hyper-thyroidism is well known, while with hypothyroidism there is a persistent constipation and autointoxication.

The influence of the thyroid over the growth and function of the sexual organs is well known. The sharper witted female owes her reasonless intuition to her thyroid. Curshman describes a case of typical myxoedema, age forty, caused by hysterectomy and oophorectomy for fibroids, and cured by thyroid extract. In cases of thyroid dysfunction, especially where there is a complicating mental factor we have repeatedly found no improvement until the thyroid extract was combined with ovarian extract. In one case at the clinic, a woman, age forty, no social ambitions, no worries or cares, listless, had a basal rate of 18 to 24. By use of thyroid extract the rate was raised to region of normal and within a few weeks the woman was a changed person, announcing her engagement which was followed by the marriage which in turn was followed by pregnancy during all of which she was kept normal by the normal administration of thyroid extract and gave birth to a healthy baby, normal so far as can be determined. And now she is again four months pregnant and by the use of thyroid extract Dr. Crile anticipates the same good results as before.

The changes of the thyroid with puberty, menstruation and pregnancy have long been known and this led Meckel long ago to remark that the thyroid is a repetition of the uterus in the neck.

Intellect and Emotion

We have noticed as a rule that patients suffering from hyperthyroidism have been very active mentally. The woman has been very actively managing the home and taking part in various clubs and literary societies. The young person has been at the head of her class in college with an ease of mental effort. People with low mentality never have hyperthyroidism. People with a deficient thyroid never have high mentality, and their emotions are curtailed to the same extent. Hyperthyroidism is frequently set off by psychic trauma. The French have called the thyroid "La glande de l'emotion." The myxodematous person cannot act on the spur of the moment, he cannot jump from a burning building promptly. He has neither the intellect nor the emotion to prompt self protection in time of danger, and his action is in proportion to his thyroid and adrenal extract.

Cause of Goitre

The question by the layman, "what causes goitre?" has been put to many a doctor. In answering this question I like to compare the thyroid to a factory in which the thyroxin is the finished product and the iodin is the raw material. An increase in demand for the finished product such as puberty, pregnancy, or chronic infection calls for an increased output by the factory. If there is sufficient raw material, or iodin, the demand can be met by the normal thyroid. If not, then the thyroid tries the other alternative and blindly enlarges the factory to meet the demand thus producing a goitre. If active hypertrophy and hyperplasia has taken place the goitre remains. This explains why so many women blame the goitre on a certain pregnancy.

In other words, goitre is a reaction of the thyroid gland to physiologic stimuli. It may

be partially hyperplastic and partially neoplastic. It often begins in fetal life forming the fetal adenoma which probably are partially neoplastic because it is practically always in this type of adenoma that carcinoma later develops. The fact that the reaction occurs more frequently in women is probably due to increased demand for the finished product—thyroxin, by mensturation, pregnancy and autointoxication.

Prevention of Goitre

In keeping with the above idea that the thyroid is a factory and enlarges in response to physiological stimuli if the iodin is not present, we can prevent that enlargement by furnishing sufficient iodin. The first practical application of the principle was in the use of crude salt containing a large amount of iodin, in the sheep industry in Michigan at a time when the industry was being crippled by goitre. This was also proven by Marine and Lenhart when they found that goitre in the brook trout of Pennsylvania was caused by (1) overfeeding with an artificial food and overcrowding. They found that goitre could be prevented in young fish by changing the diet and remedying the overcrowding or by adding a small amount of iodin to the water. Marine and Lenhart also found that the compensating hyperplasia following thyroidectomy could be prevented if the remainder of the thyroid was saturated with iodin. Kimball next gave this theory a definite trial with the school children of Akron with such good results that the prevention of goitre by the use of iodin is no longer a theory but an actual fact. In addition the maternity dispensary of Western Reserve uses iodin to prevent the goitre of pregnancy in the mother and also the fatal adenomas in the babies, the results being no longer questioned. We now give regularly iodin in the form of iodostarin or co-iodin chlorate tablets to mothers at onset of pregnancy and to the children up to the age of adolescence. Each tablet contains one mg. of iodin and one tablet each week furnishes all that the thyroid gland needs. The prevention of goitre in the mother and the foetus lies in the hands of the individual members of the medical profession while the prevention of goitre up to and into the adolescent period should be a public health measure under competent medical supervision.

But this idea as usual has been commercialized and iodin salt marketed and advertised over the country. This is very well for the children as a preventative of goitre but we have observed at the Cleveland Clinic that in those cases where already a goitre is present, generally of the adenomatous type, that the excess of iodin is picked up and converted into thyroxin thus in many instances inducing hyperthyroidism. It is the rule for patients with hyperthyroidism to tell you they have been using iodin salt and in many instances the hyperthyroidism started within a few weeks after beginning its use. Michigan has made it the law that iodin salt be the only salt used in the state. It ought to prevent all goitre in the next generation but of the present adult generation who already have goitres, there are undoubtedly several cases of induced hyperthyroidism. Hartsock has analyzed our records and thinks certainly there is an increase in the incidence of hyperthyroidism in adult males because of the widespread use of iodin salt. Therefore we condemn the universal use of iodin salt because of the danger of inducing hyperthyroidism in adults, and we give iodin in 1 mg. doses per week in chocolate tablets to the pregnant mother and to the child until the early part of adolescence after which iodin is given only under a physician's care so that it can be stopped at any early sign of hyperthyroidism.

In differential diagnosis of diseases of the thyroid the effort is more and more to simply the classification. They are merely mentioned here, as complete details of diagnosis can be found elsewhere.

1. Simple goitre—includes the hyperplasias of adolescense in which the size changes during menstruation and in pregnancy.

2. Colloid goitre—the persistent uniform lobular enlargement of the neck, the only symptoms of which are of compression of the trachea. It is generally in this class that intrathoracic goitre fall. Dyspnea, coughing cardiac disturbance and percussion give an idea as to diagnosis but we rely on X-ray in the final diagnosis of introthroacic goitre.

3. Adenomas of the thyroid are distin-

guished as discrete nodules, may be single or multiple, harder and definitely walled off from the rest of the thyroid. They may become encapsulated, cystic or calcified. These may cause pressure symptoms. Occasionally there is a hemorrhage into the gland denoted by a sudden painful enlargement of the thyroid.

4. Tumors of the thyroid—It is in the foetal adenomas that carcinoma occurs. A hard firm irregular immovable mass in a fetal adenoma, which a woman of the cancer period of life tells you has never grown until the last few weeks during which time it has been getting larger and choking her, is very likely to be carcinoma. Sarcoma is rather rare and presents the same problems as sarcoma elsewhere.

5. These tumors must be differentiated from infections as thyroiditis—a hard smooth firm generalized enlargement of the thyroid which is often mistaken for tumor, but is always follows an acute infection of some kind.

6. Myxoedema and cretimism have been mentioned under physiology of thyroid as the result of lack of thyroid secretion.

7. Hyperthyroidism—Exopthalmic goitre —As to importance in diagnosis I am inclined to place in the following order, tachycardia, tremor, loss of weight with a good appetite, increased basal rate, exopthalmus including eye signs, emotional instability, vasomotor changes and gastro-intestinal and mental symptoms in the severe cases. We have been in order to simplify matters making no distinction between hyperthyroidism and toxic adenoma, but in the latter the tremor is coarser and there is not the increase in size of gland, the eye signs nor the improvement with Lugol's solution that there is in the true exopthalmis goitre. The one point to be remembered is that the whole picture with all the data should be considered and a diagnosis made on one point alone will probably be wrong.

In the differential diagnosis of hyperthyroidism we try to exclude early pulmonary tuberculosis by careful chest examination and X-ray. Paroxysmal tachycardia has a sudden onset and sudden return of the heart rate to normal. In neurasthenia the pulse slows down to normal as soon as the patient is put at rest and the basal rate is not elevated. We have most trouble with neurocirculatory asthenia, first described by Da Costa during the Civil War in which we have rapid heart, dizziness when standing, increased cardiac rate, tremor of fingers, cyanosis of fingers and free perspiration. Many believe there is a close relationship between the two diseases and often the absence of goitre and ocular symptoms with a relatively normal basal rate are the only things on which you can make a differential diagnosis.

Prevention of Hyperthyroidism. As I said before I believe hyperthyroidism is a response of the thyroid to stimuli from elsewhere in the body. It may be that these stimuli come over nerve filaments instead of through the blood stream. Claude Bernard's experiments on the cervical sympathetic would lead one to think it might be the governing factor. Cannon in 1916 fused in six cats the anterior root of the right phrenic with the right cervical sympathetic. Respiration thus caused a continuous stimulation and these cats became excitable with tachycardia and increased basal rate (100 per cent) with diarrhea. In two that died the cortex of the adrenals was greatly enlarged. Be that as it may in seeing these large numbers of cases of hyperthyroidism I have found that in practically all there has been a drive on the organism from a focus of infection or from prolonged mental or emotional strain. We have had several cases—ligated and improve for two to three months when they would be set back into acute hyperthyroidism by an acute throat infection and some have died of acute hyperthyroidism with delirium definitely traceable to the acute infection, this has happened many times in cases of lung infections, influenza, etc. One case that lately died with acute hyperthyroidism in spite of all that I could do, we found at autopsy a gall gladder which had ruptured into the stomach and there was a marked cholecystodochitis present. In cases which do not sufficiently improve following subtotal thyroidectomy it is very much worth while to search carefully for a persistent focus of infection.

Thus in preventing hyperthyroidism I would say (1) Regular complete physical ex-

amination is necessary in order to find and remove foci of infection wherever found.

2. Remove that continuous drive on the nervous system such as worry or mental strain. Have the factory owner take a vacation and learn that the factory will run without him. Worry causes as much hyperthyroidism as hyperthyroidism causes of worry.

3. Do not over rush young people in school. Many school teachers allow the pupils to drive them into hyperthyroidism. Many students are driven into hyperthyroidism by the teachers. It is always found in the most efficient teacher and in the scholars near the top of the class.

4. Adjust self to home life and to normal sex life. Marital relations have been the back ground for certain cases of hyperthyroidism. I can call to mind now two cases of hyperthyroidism both of which seem to start from a mother-in-law's interference with their home life.

5. Avoid repeated use of tobacco, alcohol, and coffee, especially if it causes any tendency to nervousness.

6. Do not use iodine salt if you are an adult.

Keeping these things in mind I believe that hyperthyroidism is as preventable as tuberculosis. And where there is the first sign of hyperthyroidism, correct tendency by rest, mental and social adjustment of life, proper diet, and a thorough search for the removal of foci of infection if found. After acute hyperthyroidism has developed it is dangerous to attempt to take care of the foci of infection until after the hyperthyroidism has been alleviated.

Treatment of hyperthyroidism narrows itself down to prolonged rest in bed—which it is extremely difficult for patients to do, and X-ray or surgery.

Advocates of X-ray claim that it is bloodless, leaves no scar, causes no shock, no accidents, is safe. Patient can continue work, saves hospital bills and has given results.

The surgeon on the other hand claims that it often does leave a bad scar, it causes severe reactions and burns, the dose cannot be measured, the improvement is temporary. and the patients eventually come to operation at which time it is much harder to operate, and as surgery is comparatively safe, why wait until the last. I believe the favor is with the X-ray only when it is compared with the old time surgical results on the thyroid. Hyperthyroidism goes in waves and for some severe case where there was no chance for operation or where the patient refuses operation I would not hesitate to advise X-ray treatment.

A case of hyperthyroidism enters the clinic; is registered, and has complete history and physical examination. Tentative diagnosis is confirmed by consultation and basal metabolic rate. Blood work is done, has N E T examination with reference to foci of infection and also to vocal cords. Financial condition is judged and fees set by financial secretary. If patient later refuses operation after ligation fees remain the same.

Patient now enters the hospital. The mortality from the above procedure alone has been found to equal that of ligation so all very sick patients are sent directly into the hospital. In hospital patient is seen by resident who notices general condition, degree of cyanosis of fingers, condition of heart and oedema of ankle if present. Patient is now reassured and goes on pre-operative routine which consists of special diet; sod bromide gr xxx q.h.s.; Lugol's Solution one cc. tid in cream with 4 cc by rectum following operation. If the heart is fast or if there is an abnormal mechanism, Tr. Digitalis 2 cc q 4 to 6 h. is given. If very active the bromide is supplemented by luminal gr 1ss bid. Bed is wheeled out on porch every day, patient is not told day of operation. If condition does not improve blood transfusion is given, after the heart rate comes down and maintains a level for two to three days depending on what the patient will stand an attempt is made to do a ligation, lobectomy or thyroidectomy. We get our maximum improvement from Lugol's solution between the eighth and twelfth day. If the patient is emaciated and has no resistance, it is probable that a ligation will be tried and another ligation or a lobectomy three days later depending on the reaction.

On the day of the operation breakfast is omitted. Thyroid extract gr ii has been given H.S. and A.M. Morphine gr 1-6 and

atropine gr 1-150 has been given thirty minutes before operation. Patient is still in ignorance of the operation. Her special nurse has not appeared in the room. The patient is arranged in bed by the regular floor nurse after which the anesthetist enters and diplomatically starts the analgesia without exciting the patient. If the patient becomes excited or if pulse mounts rapidly operation is immediately stopped and tried on a more favorable day. Following operation patient is given infusion of 2000 cc subcutaneously. Plenty of morphia in one-sixth grain doses is used to keep patient free from pain and her nurse makes every effort to keep her comfortable in bed.

General complications are met by blood transfusion, infusion intravenous glucose, tr. digitalis, etc., as the indication arrives.

(At this point sixty lantern slides were shown illustrating the different types of goitres with the complete technique of thyroidectomy.)

In regard to technique we make the incision about two finger breadths above the suprasternal notch, in or parallel to a wrinkle of the neck, skin flaps are dissected upward and downward. Muscles are split in the midline longitudinally and a lobe of the gland exposed. We seldom have to divide the muscles transversely but in case it is necessary to protect the trachea or recurrent laryngeal nerves, we do not hesitate to divide the muscles between soft muscle clamps. Lobe is brought forward by gentle traction and resected leaving a small portion of the gland posteriorly with its capsule for the protection of the parathyroids and the recurrent laryngeal nerves and for the normal thyroid balance. Dissection is now carried across the isthmus leaving a thin margin of thyroid tissue against the trachea for the prevention of tracheitis which is a forerunner of pneumonia, and the opposite lobe is removed in the same way, after which hemostasis is secured with plain catgut sutures or ligatures and muscles are closed in midline in two layers leaving a rubber drain on either side of the trachea behind the muscles. Clips are applied to skin. If the superior and inferior thyroid arteries have been tied separately or with two ligatures there is little chance of hemorrhage but if it does occur neck must be immediately opened and the bleeding arrested. If patient is very sick neck can be packed wide open with flavine gauze and closure made more safely the following day. Tracheotomy is not delayed in cases of asphyxia from paralysis of vocal cords or from collapse of trachea.

In this way doing only the amount of surgery that the patient can stand, operating all patients as they come except those in delirium or those in the first stages of dissolution, the mortality record for thyroidectomy has been kept very close to 1 per cent and if only the good operative risk cases were operated the mortality would be only a small fraction of one percent.

ACUTE OTITIS MEDIA *

By WM. F. BECKNER, M. D.
Huntington, W. Va.

I HAVE SELECTED THIS SUBJECT because it is one of the most important with which the otologist has to deal, not so much the havoc wrought by the disease itself as the complications and sequelae that follow and also because it should be of interest to all branches of medicine and surgery, on account of its relation to other diseases.

There has been a tendency on the part of the laity and some physicians to minimize the serious consequences that follow in its wake and to neglect early treatment. How poorly the profession has succeeded in the practical application of the first principles of otologic teachings and how great the need of an awakening of interest in the subject of Acute Otitis Media, are convincingly proven by the

* Read before the Cabell County Medical Society, Huntington, W. Va., September 30, 1926.

prevalence of chronic ear disease and its consequent impaired hearing. The responsibility of this condition falls no less upon the shoulders of the general practitioner than the otologist, for it is the general practitioner who sees the majority of these acute cases first.

Every physician should equip himself with a good otoscope and familiarize himself with its use so that he can keep a check-up on the ears in all his patients, but especially the acute febrile conditions in children.

Briefly, the middle ear is a small cavity in the petrous portion of the temporal bone, bounded externally by the tympanic membrane, and internally by the labyrinth (internal ear). The roof is a thin plate of bone separating it from the cranial cavity; the floor also a thin plate of bone separates it from the jugular fossa. The eustachian tube opens into it anteriorly, which establishes direct communication with the nose and throat. Posteriorly and above, it communicates with the mastoid cells through the attic and antrum. In children the relation to the brain is much closer through the aditus and petro-squamous suture, than in adults. It is normally filled with air and contains the three ossicles which transmit vibrations from the tympanic membrane to the internal ear. It receives its chief blood supply from the tympanic branch of the internal maxilliary and a branch from the posterior auricular.

Etiology—first predisposing causes: External: weather conditions, clothing, climate and occupation. Internal: malformations or obstructions in nose and throat, acute colds, sinusitis and diseased tonsils and adenoids, the exanthemata, whooping cough, "flu," diphtheria, bronchitis, broncho-pneumonia, acute diarrhoeas in children, malnutrition, in fact anything which interferes with drainage of the eustachian tube, or any acute infective febrile condition. Diseased tonsils and adenoids are responsible—directly or indirectly, for the larger per cent of cases; some writers puti t as high as 90 per cent in children. That form associated with scarlet fever is the most feared; and flu and measles are probably the causative agents of the next most severe types.

The attending physician should make a daily inspection of the tympanic membrane in all the exanthemata or acute febrile condition.

T. H. Odeneal[1] in the Panama Canal zone, writes that 75 per cent of all the colored children suffering from malnutrition had middle ear disease and in 80 per cent of deaths from this cause; autopsy showed mastoid involvement.

Not long ago a physician called me in consultation one evening to see three cases of flu and pneumonia—to examine the ears; all three had bilateral otitis media, and on incisian of the tympanic membrane, pus was found in both ears in all three cases.

The exciting cause is bacterial invasion of the middle ear, in most cases through the eustachian tube—occasionally through injury through the tympanic membrane and maybe through blood and lymph streams.

Microscopical examination will show one or more of the following varieties of bacteria: strepto-cocci, staphylo-cocci, pneumo-cocci, micrococcus catarrhalis, B. influenza, colon, tubercle B., Klebs-Loeffler B., B. prodigiosus. The strepto-cocci with scarlet fever are the most virulent.

Symptoms: Pain and fever are the cardinal symptoms, but the diagnosis can alone be made by inspection of the tympanic membrane. The disease may be ushered in with a slight chill, vomiting, or even convulsions; usually tinnitus, fullness in the ears and impaired hearing. Pain, sharp, lancinating in character, may be localized in the ear or may be referred over the side of the head in the mastoid, side of neck, temple, eye, throat, teeth or even in the abdomen. Ofttimes there are no symptoms referrable to the ear. I once knew a good physician, diagnose a case acute appendicitis and send patient to a distant city for operation; on reaching there his trouble was found to be acute otitis media and after incision of tympanic membrane, patient made a rapid recovery and has not had any trouble with his appendix since.

Fever ranges from 99 to 105 in children —somewhat less in adults. When you have a fluctuating temperature—99 to 105, with no other discernable cause better be on the lookout for otitis media. Then we may have a latent otitis media with little or no fever

which is so frequently unrecognized because of absence of classical symptoms and attention is not directed to the ears. Rendu[2] writes that 90 per cent of all infants who die in hospitals show purulent otitis media at autopsy, although they never showed any discharge from the ears, during life. In 19 cases of children entering the charity hospitals at Lyons for various medical diseases and dying some weeks later, 18 or, 94 per cent showed the tympanic cavity filled with pus—bilateral in 15 cases. He also states that statistics show that latent otitis media in hospitalized infants diagnosed during life and left alone give 100 per cent mortality, if cared for locally the mortality is reduced about 50 per cent.

As I said before, acute otitis media must be diagnosed by inspection of the tympanic membrane. Usually we see a red congested and thickened membrane, beginning along the malleus, then extending over the posterior portion, then anteriorly, or we may have a small localized area usually near Shrapnell's membrane. Some time ago, a child was brought to me with suspected ear trouble; on examination the tympanic membrane was practically normal in color, no bulging except a very small congested area near Shrapnell's membrane. I gave the mother some local treatment to use in the ear and assured her the baby would be all right in a few days. Next morning she called me and said the child's ear had ruptured during the night and was discharging pus.

There may or may not be bulging of tympanic membrane, depending on the stage of the disease, and at times we will find bulging with little or no discoloration. This is particularly true of the tubercular type.

Complications: Mastoiditis, labyrinthitis, meningitis, sinus-thrombosis, brain abscess, general septicaemia, facial paralysis, paralysis of the sixth nerve, diarrhaea in infants, heart lesions, acute nephritis. Metzenbaum[3] recently reports the case of a man with acute otitis media developing acute hemorrhagic nephritis with uremia. Mastoiditis is by far the most frequent complication. Intracranial complications are the most fatal. In a report of the Royal Infirmary of Edinburgh[4] covering a period of five years, 1914 to 1918, inclusive, reports of 3918 cases of middle ear disease, 2 per cent had intracranial complications, 6 per cent occurred in acute otitis media and 1.4 per cent in chronic otitis media, intra-cranial complications occurring more than twice as often in chronic otitis media as in acute otitis media.

Intestinal indigestion or colic in infants may have as its cause an afebrile catarrhal or purulent otitis media, especially if the symptoms are more pronounced at night with history of acute coryza. Occasionally we see infants who have been subjected to most unreasonable food changes and deprivations, even weaning from an adequate breast milk supply, when an examination and treatment of an otitis media was all that was indicated. Persistent diarrhoeas of children in summer, that do not yield to dietetic and other measures are quite often relieved by attention to the middle ear or by mastoid operation if necessary.

Treatment: This applies to the usual class of cases that come up in our every day practice and not the atypical cases which may require other methods.

The treatment comes under three heads; care of the ear, care of the nose and throat and care of the general condition of the patient.

First. Care of ear, depends much at what stage of disease the case is first seen. If seen early with pain, slight congestion and no bulging, use a 5 to 10 per cent cocaine with adrenalin pack, changed every hour until pain ceases, or we may use 3 to 5 per cent phenol and glycerine. Apply cold applications, intermittently, on 15 or 20 minutes and off 15 or 20 minutes, also use inflation of eustachian tubes to open up and facilitate drainage. If cases are seen early (but unfortunately for the sufferer it is seldom we see these cases early) and this treatment followed closely it is seldom necessary to do a myringotomy. If symptoms do not abate within a few hours we then try heat, hot boric acid irrigation, or dry heat, in form of hot water bottle or salt bag, andif this is not followed by prompt results,do a myringotomy; make a good free incision and not a paracentesis; first cleansing the canal with alcohol, after incision irrigate gently or

cleanse canal by wiping it out to prevent blood clotting and blockingincision. I. W. Fawcett[5] advocates, massage of the tympanic membrane with the otoscope immediately after incision is made to open up the eustachian tube, which is recognized by a bubbling sound in the nose of patient. This method, or inflation through the nostril may be kept up occasionally throughout the course of the disease. Then we use what is popularly called "pink drops," iodine, camphor and menthol in liquid petrolatum, instilled in the canal every three or four hours. If there is excessive discharge and the canal becomes blocked it should be kept clean by an irrigation with boric acid or normal saline solution followed by suction. If the discharge is thick and tenacious irrigate; if thin and watery it may be wiped out with cotton on applicator. Instead of pink drops we may use acriviolet 1-200 or 1-250, metaphen 1-1000 to 5000, or mercurochrome 2 to 4 per cent.

I wish to emphasize early myringotomy; few middle ear infections would go on to mastoid operation and the number of cases of impaired hearing would be reduced, by resorting more frequently to early opening of the ear drum. Contemplation of this procedure on part of the patient and family and quite often the family doctor, is usually characterized by hesitancy, yet would it not be better to open several drums too early than to let a single case go until it ruptures, or wait until a mastoid operation is necessary. No doctor hesitates about opening the drum when the general symptoms are severe and the membrane bulging, but neither should one hesitate when the temperature remains elevated, even if the membrane is only slightly congested, and no bulging. This procedure may not meet with the approval of all, yet I wish to emphasize that it will do no permament harm, if properly done, and will save our patients many hours and possibly days and years of suffering.

In doing a myringtomy, if there is no contra-indication, a general anaesthetic is to be preferred, especially in children. By preference we use ethyl chloride, because of its quick action, easy administration, quick reaction of the patient and little or no untoward symptoms following.

It may be necessary to open the ear drum more than once. We have done as many as eight or ten myringotomies on the same patient with resultant complete recovery without mastoid operation.

Second. Care of Nose and Throat: There should be instilled in each nostril a few drops of a 10 to 15 per cent argyrol or neo-silvol with or without adrenalin every three or four hours; and it is important to have patient lie on its back, with head turned toward affected side. There are other remedies probably as good, such as mercurochrome, metaphen, acriviolet, collene, etc., and if patient is old enough have him use hot saline gargle every four to six hours.

It is very important that this nose and throat treatment be carried out in acute colds, measles, scarlet fever, diphtheria, broncho-pneumonia, or any disease involving the respiratory tract, in order to prevent involvement of the middle ear, for after all the prevention of disease is most worthy of commendation and worth vastly more to humanity.

During the interim between attacks diseased tonsils and adenoids should be removed, sinus infections eradicated, and any malformation or pathology about nose and throat which interferes with proper drainage and aeration of middle ear should receive proper medical or surgical intervention. Ofttimes it is necessary to remove tonsils and adenoids and institute free drainage before you can effect a cure of otitis media.

Third. General Care: Patient should be put to bed, diet regulated, malnutrition, rickets and kidney disturbances looked into and treated; see that an acidosis is not present, or does not occur during course of disease. Look after elimination of bowel, kidney and skin.

After Treatment: The end results of suppurative otitis media are often disappointing because the patient considers himself cured when there is no longer any pus in the external canal. The importance of after treatment should be impressed upon every patient. The opening in the drum may not be closed; touching the edges with 5 to 10 per cent silver nitrate will often encourage closure. Return to normal is encouraged by

gentle massage of drum and inflation of eustachian tubes and middle ear, every two or three days for two weeks. Patient should not be allowed to wear cotton in the ears after the discharge ceases. I believe it is the neglect or lack of after treatment that often gives incipiency to defective hearing and deafness often attributed to the infirmities of old age.

The importance of this subject from an economic standpoint is made manifest when it is shown that a man with disease of the middle ear loses from 10 to 70 per cent of his value in the labor world, and also suffers untold social embarrassments and mental apprehensions as to the ultimateo utcome.

REFERENCES

1. Odeneal, T. H.: Annals Otology and Laryngology, June, 1923.
2. Rendu: Annals Mal. d'oreille, April, 1923.
3. Metzenbaum, M.: The Laryngoscope, January, 1926.
4. Royal Infirmary of Edinburgh: Year Book, 1923, Eye, Ear, Nose and Throat, page 261.
5. Fawcett, I. W.: West Virginia Medical Journal, August, 1926.

CONDITIONS COMPLICATING DISEASES OF THE EAR, NOSE AND THROAT*

By C. B. WYLIE, M. D.
Morgantown, W. Va.

THE complications which may attend the varied pathologic conditions arising in the ear, nose and throat are far too numerous to be adequately dealt with in a single paper. In the limited time at my command I can do no more than touch briefly upon a few of the more frequently occurring, and in particular, try to emphasize the importance of preventing their arising in the first place, or, in the event of failure to prevent them, of equipping one's self with the adequate diagnostic knowledge and technical skill so as to be able to detect and abort them before they have progressed far enough to produce serious or even fatal results. This means, in short, that the oto-rhino-laryngologist can by no means confine himself to anatomic and pathologic knowledge of only those parts of the human organism with which his specialty is concerned; he must recognize the first indications of brain involvement in sinus disease as promptly as would the neurologist; he must realize the meaning of the eye signs quite as well as the ophthalmologist; and he must in no wise fall behind the internist when it comes to diagnosing the thoracic and abdominal symptoms which so frequently attend sinus and tonsillar affections or even the so often neglected and underrated "common cold." In this as in so many other phases of activity, experience is our best and most reliable teacher, but her course is a difficult one and her tuition charges extremely high, so if it be possible for us to obtain her lessons second-hand from those who have paid her full price, by all means let us do so.

There is no more notable example of this need for extensive anatomic and therapeutic knowledge in the ear, nose and throat man than that presented by the common cold. Many of the complications of this ubiquitous affection are directly within his province—sinus infections, otitis media or mastoiditis—but I am not thinking so much of these as of involvement of the lungs, heart, kidneys and so on, in the form of pleurisy and pneumonia; endo-, myo- or pericarditis; arthritis, nephritis, and the various forms of neuritis. All these lie within the province of the internist, yet their prevention is largely a matter of proper management of the acute processes within the nose and throat. The "head cold" and "sore throat" are the prodromal symptoms which should give warning that any additional depression will reduce the organism's power of resistance. This additional depression is most often the result of

* Read before the West Virginia State Medical Association at the fifty-ninth annual session, May 27, 1926.

chilling the body surface, most probably augmented by improper elimination in the gastro-intestinal and urinary tract, and through the skin, with improper ventilation of the upper respiratory tract as a third factor. Reasoning from these premises, the proper treatment should be easy of application: (1) The patient is ordered to rest at home in a well-ventilated room; (2) elimination through skin, gastro-intestinal tract and kidneys is properly encouraged, and assisted by taking a light but highly nutritious diet; (3) the nasal chambers are kept freely open by mild and non-irritating contractile agents, such as a very weak solution of epinephrin.

In relation to the common cold, it may be well to mention the un-wisdom of undertaking instrumentation in the height of this or any other acute nasal or laryngeal process. The ill-advised employment of instruments—as for example, the introduction of a probe into a blocked frontal sinus, may set up a meningitis, or produce a brain abscess; the clearing of a sinus blocked by secretion by means of compressed air is also a very doubtful measure, and the same is true of attempting to wash out the antrum during the acute stage of an infection, either by way of its natural opening, or by puncturing the wall below the inferior turbinate. Many instances have come under my direct observation where such measures turned a trifling "cold" into a grave or even fatal lesion.

Complications of Nasal Lesions

The fearful effects which may follow operation improperly or unwisely performed, find their most striking illustration in the perichondritis and chondritis which are sometimes seen after slicing or reducing operations on the tip of the nose. The perichondrium may so react as to leave the nose permanently enlarged, thickened and stiff, resisting all efforts at reduction, while if chondritis is set up with associated cellulitis, the entire tip may collapse and shrivel up, causing a truly horrible disfigurement. Cellulitis alone, under these circumstances, is not a very serious matter, if it does not advance to abscess formation, and also the formation of hematoma about a corrected nose will quickly clear up in most cases, the circulation in the nasal region being so good as to take care of even serious lesions in remarkably short time.

Too early incision of a "boil on the nose" is another example of unwise instrumentation, for this, together with manipulations such as squeezing and so on, has been known to lead to a septic phlebitis or even longitudinal or cavernous sinus thrombosis. Nasal furunculosis is too often lightly regarded; the medical attendant should always be on the watch for the first symptoms of sepsis in connection with it, and be ready to take prompt action, scrutinizing the blood picture for evidence of leukocytosis and not waiting for the appearance of edema of the eyelids or enlargement and tenderness of the cervical glands, or the high temperature and increased pulse-rate which give evidence of the existence of a condition of grave sepsis.

Sepsis and emphysema may follow fracture of the nose, a traumatic accident perhaps not so often encountered in clinical practice today as in the old times of saloon brawls, though the automobile collision is doing its best to keep us supplied with such cases. As nasal fractures are often compound they are peculiarly liable to infection, and the wise surgeon will make sure of thorough disinfection before putting in splints and strapping, provide adequate drainage, and take precautions against tetanus, as well as fully instructing his patient how to avoid disturbance of the injured member until healing has had time to take place.

Sinus Disease Complications

It is in connection with sinus disease that some of the most serious complications are met by the nose and throat man. These occur much more frequently in children than in older patients, in whom such extensions are likely to be in the form of acute exacerbations of chronic suppurative processes. Peri-orbital inflammation due to retention of secretions in ethmoid or antrum, occurring in children, is usually evidenced by high temperature and rapid pulse, and swelling so great as to completely block the nose on the side affected. Eye symptoms, such as injection of the conjunctiva and chemosis appear very early, while even a mild infection may induce optic nerve irritation or retrobulbar

neuritis, with considerable disturbance of vision. Graver infections will limit the eye movements as the process advances, and periorbital cellulitis may quickly extend to panophthalmitis. Complete loss of vision may attend some of the chronic forms of sinus disease, examination showing enlargement of the blind spot with positive or relative scotomata, indicative of retrobulbar neuritis. The exact causal relationship of these ophthalmic conditions to sinus infection is not always clear, but it has been practically demonstrated that these eye difficulties can be cleared up by exenteration of the posterior ethmoid cells and opening up the sphenoid.

That meningitis may follow surgical intervention upon the sinuses is a fact only too well appreciated by all of us. It is easy to enter the orbit when curretting a necrotic ethmoid labyrinth, opening an avenue for the progress of whatever infecting organism may be present, not only into the orbital structures, but into the venous system so as to set up a cavernous sinus thrombosis, or along the optic nerve sheath to the meninges, leading to inflammation of these structures or to the formation of a brain abscess. Under these conditions a cavernous sinus thrombosis and panophthalmitis may be present at the same time.

Meningitis may also be set up by way of the olfactory nerves. The type presented will depend upon the kind of organism which is responsible for this particular infection; in the influenza epidemic of 1918, for example, the induced sinus disease complicated by meningitis was of a diffuse type, which so rapidly affected the brain tissue that death from encephalitis ensued before meningitis had time to be manifested by the usual symptoms. When meningitis is caused by mechanical interference with the sinuses, probing, etc., it usually takes the leptopachymenic form, and may come not by the olfactory nerve route, but through direct extension from the frontal, ethmoid and sphenoid sinuses.

Brain abscess usually forms in the frontal area, though at times the infection travels along the brain surface or through the circulation to a distant part of the cerebral tissue. As a rule, however, rhinogenic brain abscess will be pre-frontal, with headache at the site of the lesion, although occasionally pain by *contracoup* may be referred to any part of the head. The intensity of the pain will depend upon the degree of meningitis associated with abscess formation, though generally, it is much more excruciating than when the meningeal inflammation alone is present.

The earliest focal symptoms of meningitis aside from headache are absence of the knee-jerk, positive Kernig's sign, and the presence of the Babinski reflex; the pupils are usually sluggish in reaction and irregular as to relative size. If brain abscess has formed there will also be partial or complete choked disc. Spinal puncture in meningitis will give evidence of increased intracranial pressure, and while the fluid withdrawn may be either clear or cloudy, its cellular content will be increased, though micro-organisms may be or may not be found together with the pus-cells. When abscess is present the spinal puncture will give little additional evidence, and the signs usually enumerated, such as muscle spasm or loss of sphincter control are terminal indications occurring too late to have diagnostic value.

When we are confronted with a cavernous sinus thrombosis, the earliest symptoms will be those due to blockage of the return circulation. We must, of course, consider the source of infection—whether aural, nasal or facial—as well as determine the nature of the casual organism. Pain in the eyeball will accompany the edema of the eyelids and distension of the intraocular veins which evidence the circulatory disturbance, and there will be rapidly increasing congestion and edema of the orbital content. The chills, high temperature and rapid pulse will be explained by the evidences of the blood culture, but when the thrombosis is co-existent with some of the other sinus disease complications already enumerated, differential diagnosis will be difficult if not impossible.

Tonsillar Complications

Turning now to throat affections and the complications one is liable to encounter in connection with them, we are once more confronted with the disastrous results which may accrue from unwise and meddlesome

surgery. Operation upon an acute virulent tonsillo-pharyngitis may easily set up a septic endocarditis, a pneumonia or any one of the grave septic embolisms or infarctions. Ludwig's angina or most distressing cervical cellulitis may result from surgical interference in such an acute condition. Confusion of an acute septic state with peritonsillar abscess may account for such a surgical blunder, but it cannot excuse it. The laryngologist must be sufficiently informed beyond the confines of his specialty to enable him to avoid any such errors.

To be sure, complications of peritonsillar abscess are by no means infrequent, for edema of the larynx may be so great as to threaten death by suffocation; rupture has more than once led to aspiration pneumonia; while the sinking of the abscess anteriorly may induce an acute thyroiditis, or posteriorly be followed by middle ear tinnitus. In general, no surgery is indicated beyond the opening of the abscess when it has progressed far enough to present fluctuation, and if, despite precaution, complications do occur, to make use of only expectant and supportive treatment.

Of the complications arising from surgical intervention upon the tonsils, so much might be said that it seems almost useless to attempt even to mention them in so brief a paper as this. The anesthetic, while not strictly a part of the operation, has in the past caused so many accidents which have been recorded as due to tonsil surgery, that it must logically be mentioned first among the possible complications which attend it. Now that cocaine has been replaced by its safer congeners, such as novocaine and apothesine, local anesthesia is applicable to the general run of patients, with the exception of young children and those of neurotic temperament, and the complications which sometimes arise when the cough reflex has been abolished by the employment of a general anesthetic, are thus obviated. In my immediate personal experience there has never been any difficulty experienced from the use of local anesthesia.

Hemorrhage still offers considerable difficulty to the tonsil surgeon, for though our modern methods of determining clotting time have pretty well served to give warning of hemophiliac tendencies, the variation in the anatomical location of blood-vessels. the wide differences in size of lumen and all degrees of pathological change which may have taken place in them, can only be determined when the patient is on the table. Though technique undoubtedly has much to do with this question of hemorrhage, I do not hesitate to assert that when the patient is an adult it really makes little difference whether the tonsil is excised by a single instrument, or dissected out. It seems reasonable to assume that the employment of a single instrument would cause more bleeding because more vessels would be opened at one time, whereas in dissection, as each vessel is severed it may be hemostated or compressed, if necessary, so that dull dissection is usually a less bloody performance. Accurate grasping and ligation of a vessel—especially an artery—greatly decreases the likelihood of hemorrhage or hematoma formation following tonsillectomy. In some conditions, however, sponge and clamp compression will be necessary and it is the part of wisdom to use them. Probably no one of our modern devices has done so much to stop bleeding or to prevent the aspiration of blood exuded, as the suction apparatus.

The cautious tonsil surgeon will examine the deciduous teeth of his youthful patients, so as to be sure that the mouth gag does not break or dislodge loose ones. Cases are on record where aspiration of such a tooth into a bronchus or other part of the lung has produced lung abscess, a complication wholly avoidable where ordinary precaution is observed.

Infection should not, of course, follow any operation carried out by a competent and careful surgeon. Occasionally, however, emergency operation in the presence of an especially virulent organism, may be followed by infection even when every care is exercised. When this occurs we may get tubal, middle ear or mastoid infections, but in the majority of cases these are transitory affairs and do not lead to grave complications. If a tympanic involvement causes bulging of the membrane, it is wisest to incise the drum at once. Mastoid involvement is a more serious

matter, and possible intra-cranial complications should always be regarded with alarm and vigorous measures undertaken to prevent them. Sinus infection as a complication of tonsillectomy is not so frequent as its reverse—inflammation of the tonsils secondary to sinus disease. While the application of proper treatment to the sinuses is the logical method of handling such an eventuality, it is essential to refrain from manipulation of the nasal mucous membrane while the throat is in an active state of infection, if this is at all possible.

Failure of the operative wounds to heal, or long delay in healing with the formation of unhealthy granulations within the fossae sometimes occurs where proper pre-operative investigation has been neglected, so that the existence of a constitutional disease such as syphilis, tuberculosis or diabetes, has been overlooked. Here the employment of the previously neglected laboratory tests will usually explain the cause of the trouble, and application of suitable treatment to the basis affection will in most instances, be followed by a clearing up of the throat condition.

Complications of adenoid disease or operations upon these tissues are not so frequent as those associated with the tonsils. Enlarged or infected adenoids constantly expose an individual to infection which is favored by the blockage of ventilation of middle ears and nasal accessory sinuses; partial or complete deafness may be caused by the presence of these tissue masses in the air passages, and in very young infants may even interfere seriously with breathing while nursing and prevent their obtaining a proper amount of nourishment. The operative removal of adenoids may be attended by any of the complications mentioned in connection with tonsillectomy, but as a rule, post-operative complications are rare. If there is a secondary infection, it may be followed by the formation of granulations which simulate a return of the adenoid tissue mass. Occasionally, such apparent return or reformation of adenoid tissue has, on investigation, proved to be of tuberculous origin.

Allied to tonsil and adenoid complications is acute laryngitis in which—whether its origin be infectious, traumatic or otherwise, edema is always the manifestation most to be feared. If the resultant swelling is augmented by perichondritis or abscess formation about the neck, the situation may be a very grave one indeed. When edema so located results from intoxication or the ingestion of chemicals—potassium iodide or some arsenical for example—or is secondary to trauma or a cardiac or renal disturbance, bronchoscopy can usually be depended upon to tide the patient over until the cause can be removed. If due to the presence of a foreign body tracheotomy may be obligatory, and this is likewise true in some cases of laryngeal perichondritis or abscess when it becomes essential to relieve the venous blocking without delay. While less severe palliative measures should always be tried at first, it is never safe to be unprepared for radical intervention, and the proper equipment should always be kept at hand, so that a tranquil tracheotomy can be done if necessary, and the patient's life not hazarded by doing a hurried operation when suffocation is imminent.

In the course of this brief review many complicating conditions have come to mind, upon which it would be very profitable to enlarge to considerable extent. But though this is impossible, I trust that what I have found time to say will prove at least suggestive, and may serve to emphasize the necessity of being prepared for emergencies. There is no branch of medical practice where foresight has a more distinct advantage over "hindsight" than in the work of the ear, nose and throat man, and success in this special field depends quite as much upon his knowledge and ability *outside* the boundaries of that field, as upon his prowess "inside the fence." A specialist has been defined as a man who knows something about everything, and everything about something, and no oto-rhino-laryngologist who does not measure up to this standard can hope to reach high eminence, or to attain to that harmony and understanding of his professional colleagues and their peculiar problems, which is the most desirable consummation of all our labors.

DISCUSSION

DR. C. L. HOLLAND, Fairmont:

I am not a nose and throat man, by any means; my work is pediatrics, as most of you know, but I want to stress one or two things that Dr. Wylie said which impressed me. First, let me remark that in regard to an educational campaign it seems to me one of the widest gaps in the whole field is this matter of "common colds," of nose and throat infections. The things that can happen to your patient, especially to your child, as a sequal to nose and throat infections, are numerous and severe. There is a tendency on the part of the laity to neglect the common cold and let it drift along, and simply because the child is not very sick it gets little attention. Recently I saw in consultation a boy, the child of a rather prominent family, with a very intelligent mother. He had had some throat trouble but had "no blisters in the throat," as the mother said, no membrane. He stayed around the house for a day or two, then was allowed to go out. It was in the winter time, and he went coasting. Soon he developed rheumatic affection, and a few days after showed muscular twitching. About that time I saw him, with his physician, he then had not only chorea but a cardiac involvement—pericarditis with effusion. That little fellow will end with a crippled heart, because the mother did not know the danger from the common cold. Some time ago I saw a little girl with enlarged tonsils and what was called "growing pains." I advised that the tonsils be removed. I lost sight of her for a time but presently saw her again after a lapse of some months and found then that she had a crippled heart. I learned that in the meantime, she had had chorea. During the course of the conversation I learned that she had been having spinal adjustments two or three times a week for a period of over six months. If some one like Dr. Wylie had gotten hold of her and removed her tonsils, doubtless she would have been saved from falling into the hands of the chiropractors and escaped that cardiac condition.

DR. V. T. CHURCHMAN, Charleston:

As a member of the section on eye, ear, nose and throat, I wish to say that no paper was presented to that section which in my opinion was more important than this paper of Dr. Wylie's. I am sorry the time is so limited that we cannot discuss it fully. I simply want to call your attention to a thing which happened not long ago in my practice. There has been too much promiscuous tonsil removing by men not capable of doing the work. Within the last sixty days I have seen a case that had been operated on for adenoids and tonsils in which the anterior and posterior pillars on one side had been entirely removed, and the uvula; and in attempting to remove the adenoids the operator had removed the end of the Eustachian tube. That child had a rather serious complication, as you may guess—otitis media. When I first saw it, the child had a temperature of nearly 106. It was no time to operate, as the child was almost in a coamatose condition when I saw it. It had brain abscess and died.

The great trouble with the medical profession is that they think the tonsil and adenoid operation is a very simple operation and one that they can do at all times and under all circumstances. I attribute the death of that child to nothing more than the ignorance of the doctor who did the operation.

DR. W. J. JUDY, Parkersburg:

I am glad Dr. Churchman sounded the warning he did, and I agree with him that this is a paper of great interest both to the general practitioner and the pediatrician, as well as the eye, ear, nose and throat man. I know of just such a tragic ending as he spoke about. The laity do not know who is competent to operate. Because a surgeon can remove an appendix successfully they think he can do a successful tonsil operation, and we possibly have a great many surgeons who can do both very successfully. I have been in the habit of referring my patients to a skilful operator, always. I expect I might remove tonsils myself, but I do not do it.

The great importance, again, of infections from the sinuses, etc., we see in our everyday practice. I had a patient who almost lost an eye from infection of a tooth and maxillary sinus. It comes very close to me, too. I had my oldest daughter operated upon several

years ago by a man whom I thought was a competent operator, and he left about one-third of the tonsil in situ. She nearly died every year from peritonsillar abscess and rheumatic involvement until I brought her to a competent throat man and had the remains of the tonsils removed.

DR. C. H. KEESOR, Wheeling:

I think what Dr. Churchman said is true. Just such a thing as he cited occurred. I think it is a question, sometimes, of misplaced judgment and confidence in men. There are men who can do things and men who cannot. I think one of the greatest things in our profession is for men to have the courage to say, "I can do this, but that man can do it better."

I saw a very severe case of ozena that had gone along for quite a long period of time and was very objectionable to the other persons in the school. I found it was due to a foreign body in the nose, which had been there for a long time. I have had under my observation two children during the last year with rheumatic conditions. Both should have had tonsillectomy a long time ago. One child spent thirteen weeks in bed last spring because of a serious heart lesion, and the other one died.

DR. A. P. BUTT, Elkins:

I wish to commend the paper very highly. I think about all the personal ills I have had came from the failure to recognize these complications during my boyhood. I wish to commend what Dr. Churchman and the other speakers have said.

The importance of these complications can not be overestimated. Only recently a physician told me of his brother-in-law who for some two years had been under the care of numerous and sundry physicians and hospitals in one of our larger cities. He was then almost blind. I, without seeing him, advised he consult Dr. Crowe. Here he was informed that it was too late. Blindness was due to a sinus affection which could have been properly treated at an earlier date.

So failure to recognize and refer these patients to those competent to treat them is not entirely confined to the wilds of West Virginia.

DR. F. T. SCANLON, Morgantown:

I want to congratulate my friends and compliment Dr. Wylie on this very opportune paper and add this word—not all based on my experience in eye, ear, nose and throat work, but after ten years of general practice, to which I revert sometimes with chagrin. I have examined people, sometimes seeing only the nose, because of my unfamiliarity with it. I have become accustomed now to telling people who come to me with a common head cold or catarrh that to me it means a smoldering fire that may smolder perhaps for years or may break out suddenly and cause destruction of valuable property. A common cold may do untold damage to vital tissues or cause invalidism for years. When we know the complex arrangement of the sinuses we can understand that it is not a simple thing when the sinuses—the ethmoid, sphemoid, naxillary and frontal sinuses—become infected with some virulent organism. It is not a simple thing when a parent brings a child in with bulging eardrums. They ask if it is serious, and, as I try to be frank with my patients, I tell them it is serious, that it is dangerous, that there is no time when the child may not wake up in the night screaming because of the development of otitis media or mastoiditis. We have all seen children with infected tonsils which have gone on for year after year. Later we are called to see these children because they have growing pains and have pains in the joints, and we see that the fire which has been smoldering has broken out. A heart condition has developed that is likely to add another to the list of untimely deaths.

I was glad to see one general practitioner yesterday carrying an electric otoscope. I am speaking not for the eye, ear, nose and throat man, but in the name of humanity when I ask you to pay attention to these complications of eye, ear, nose and throat diseases.

TRIPLE INTESTINAL INTUSSUSCEPTION

REPORT OF A CASE

By BANKHEAD BANKS, M. D.
Charleston, W. Va.

Cases of compound intestinal intussusception are sufficiently rare to merit report, especially one of triple variety of ten days' duration, with recovery following operation. In 879 cases of intussusception reported by Perrin and Lindsay and Lichtenstern, we find the compound type representing about 0.05 per cent of the total.

The following figures, as given by Sargent, are interesting as showing the results of operations at different times from the onset of symptoms.

Day	*Mort. %*
First	37
Second	39
Third	61
Fourth	67
Fifth	73
Sixth	75

No cases are reported as recovering from operations performed later than the sixth day. However, there is mentioned, in the statistics of ten years work at the Leeds General Infirmary, a case operated at the end of the fourteenth day, but the result is not given.

Baby Charles H., age 10 months, was admitted to the Charleston General Hospital on August 7, 1926. From the parents, rather intelligent negro people, was obtained a history typifying intestinal intussusception, of ten days duration. The child was in extremely critical condition—emaciated and dehydrated. On the classical history and physical findings diagnosis was made and operation performed at once by Dr. John E. Cannady, from whose operative report I quote:

"Right rectus incision. Findings—Intussusception mass left upper abdomen, in transverse colon, and beginning of descending colon. After reduction of this intussusception mass it was found that there evidently had been first an intussusception of Meckel's diverticulum into the lumen of the ileum, this in turn had produced an intussusception of about six inches of ileum into the succeeding portion of ileum; this intussusception mass had passed into the cecum, producing an intussusception of the cecum and transverse colon; the entire mass had begun to pass through the splenic flexure.

"After reduction, to our surprise, the gut appeared viable. The diverticulum was excised and enterostomy carried out by the omental plastic method, tube being sutured into lower angle of the abdominal wound. Tube removed on eighth day and patient discharged on thirteenth post operative day; after over two months child is still well."

I report this case as being interesting in showing nature's effort at ridding the intestinal tract of the equivalent of a foreign body —in this case originally an invaginated Meckel's diverticulum—by the production of compound intussusception; also interesting in showing that gut may be viable, and recovery follow operation, after ten days of intestinal intussusception.

EFFECT OF ATROPINE ON GASTRIC FUNCTION IN MAN

Dr. Arthur L. Bloomfield of Baltimore, Md., in a pharmacalogic study of this subject published in *Archives of Internal Medicine* (Sept. 15, 1926) concludes that following the administration of atropine (1) the volume of gastric juice was reduced; (2) the degree of acidity was apparently but not uniformly reduced—however the reduction was marked in 10 out of 12 cases—and (3) the motility of the stomach is not essentially altered although the stomach contents are more rapidly emptied after the administration of atropine."

If atropine will reduce the volume of acid after motility and control gastric spasm it is evidently a potent remedy in gastric hyperacidity, whatever the cause.—C.A.R.

THE WEST VIRGINIA MEDICAL JOURNAL

C. A. RAY, *Editor-in-Chief* - - - - - - - - Charleston

ASSOCIATE EDITORS

J. HOWARD ANDERSON, Marytown — WALTER E. VEST, Huntington — CHARLES W. WADDELL, Fairmont — HARRY M. HALL, Wheeling

THE JOURNAL issued on the first of each month. Entered as second-class matter, January 1, 1926. Acceptants for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Authorized July 24, 1919.

Subscription to Members ..... $2.00 Per Year
Subscription to Non-Members ..... $3.50 Per Year
Single Copies ..... 50 Cents

OFFICERS

President:
J. R. BLOSS ..... Huntington
President-elect:
CHESTER R. OGDEN ..... Clarksburg
First Vice-President:
R. O. ROGERS ..... Bluefield
Second Vice-President:
H. C. SKAGGS ..... Montgomery
Third Vice-President:
D. A. MACGREGOR ..... Wheeling
Treasurer:
HUGH G. NICHOLSON ..... Charleston
Executive Secretary:
MR. STERRETT O. NEALE ..... Charleston
Delegate to A. M. A., 1926:
J. R. BLOSS ..... Huntington
C. R. OGDEN, *Alternate* ..... Clarksburg
Delegate to A. M. A., 1926-27:
H. P. LINSZ ..... Wheeling
R. A. ASHWORTH, *Alternate* ..... Moundsville

COUNCILORS

First District:
H. P. LINSZ, (1-year term) ..... Wheeling
C. G. MORGAN, (2-year term) ..... Moundsville
Second District:
C. H. MAXWELL, (1-year term) ..... Morgantown
C. H. HALL, (2-year term) ..... Elkins
Third District:
JOHN FOLK, (1-year term) ..... Bridgeport
C. R. OGDEN, (2-year term) ..... Clarksburg
Fourth District:
J. E. RADER, (1-year term) ..... Huntington
W. E. VEST, (2-year term) ..... Huntington
Fifth District:
J. H. ANDERSON, (1-year term) ..... Marytown
H. G. STEELE, (2-year term) ..... Bluefield
Sixth District:
R. H. DUNN, (1-year term) ..... South Charleston
C. A. RAY, (2-year term) ..... Charleston

¶ All original articles for THE JOURNAL must be made to it exclusively. Communications and items of general interest to the profession are invited from all parts of the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

¶ Our readers are requested to send marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

¶ It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

¶ Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

¶ Advertising forms will go to press not later than the tenth of each month. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

¶ Should be made by check, draft, money order, express order or registered letter to Sterrett O. Neale, 303 Professional Building, Charleston, W. Va.

STANDING COMMITTEES

Medical Defense Committee

H. P. Linsz, Wheeling; C. R. Ogden, Clarksburg; C. G. Morgan, Moundsville.

Committee on Scientific Work

Harry G. Steele, Bluefield, chairman; E. L. Armbrecht, Wheeling; E. P. Smith, Fairmont, members; Mr. S. O. Neale, Charleston, ex-officio secretary.

Public Policy and Legislative Committee

R. A. Ireland, Charleston; G. A. McQueen, Charleston; R. H. Walker, Charleston; James McClung, Richwood; J. R. Bloss, Huntington; D. A. MacGregor, Wheeling.

Committee on Hospitals

Robert J. Reed, Wheeling; B. H. Swint, Charleston; R. J. Wilkinson, Huntington.

Committee on Professional Relations

J. R. Shultz, Charleston, chairman, (3-year term); H. G. Nicholson, Charleston, (1-year term); H. R. Johnson, Fairmont, (2-year term); A. G. Rutherford, Welch, (4-year term); W. R. Goff, Parkersburg, (5-year term).

Surgical Section

D. M. Aiken, Wheeling, chairman; J. R. Shultz, Charleston, secretary.

Eye, Ear, Nose and Throat Section

C. B. Wylie, Morgantown, chairman; G. K. Nutting, Hinton, secretary.

Woman's Auxiliary

President, Mrs. A. G. Rutherford, Welch; *First Vice President*, Mrs. W. H. St. Clair, Bluefield; *Second Vice President*, Mrs. J. P. Lilly, Morgantown; *Secretary*, Mrs. C. M. Scott, Bluefield; *Treasurer*, Mrs. C. A. Ray, Charleston.

EDITORIAL

MEDICAL EDUCATION

With the many opportunities for advanced medical knowledge there is little excuse for a doctor of the present age to be "behind the times" in his profession. Only a few years ago we had little but the postgraduate schools and clinics in some of the large cities at which a prescribed course meant that the doctor must leave his practice for six weeks to three months and expend a large sum for tuition and living expense. Then, as now, the postgraduate school is indispensible to the young practitioner who has been out of college from one to three years.

This is the age at which we begin to consider the new things we read of doubtful utility when compared with our college teaching and experience. There is, with each passing day, something new in medicine and if one is to keep abreast the times one must keep posted.

The writer well remembers the impression gained from his first postgraduate course three years after graduation when, in a reflective mood, he could look back and consider a number of patients who had died without the application of remedies which might have turned the tide toward a favorable outcome. The success of any physician is based upon the recovery of patients who, by choice or otherwise, fall into his hands. He may be a brilliant operator or diagnostician but if he fails to keep in mind that each case is an individual patient and every known remedial measure should be at his command then the chance of ultimate recovery is minus to the extent of his lack of knowledge of modern truths.

Compared with the postgraduate opportunities of 30 years ago, the American Medical Association and the Southern Medical Association meet once a year in different parts of the nation where all modern discoveries are discussed. The American College of Physicians meets once a year in still a different section for a session of one week where only medical subjects are discussed; likewise the American College of Surgeons convenes in its districts for the discussion of subjects confined to surgical methods. There are the state and inter-state medical associations with their noted speakers and last but not least there is the county medical society with its periodical session for the dissemination of facts relating to medical practice.

Last month we attended one of these postgraduate assemblies in Cleveland. During the four days there were more than 150 lectures and clinics by physicians and surgeons from all parts of the world and the only cost was $5, plus membership in a state medical association which is required by virtually every organization of standing.

In addition to the scientific knowledge gained in these educational sessions one gains that personal contact with many men of national repute who have as investigators and authors astounded the world. The more often one attends these sessions the greater is his opportunity for professional and social relations.

Those of our readers who do not attend our own state meetings can not conceive the talent among the men of West Virginia and one misses the opportunity to become acquainted with and know personally some of the "best fellows on earth." Your county society needs your presence at every meeting and unless you are an exceptional human being, you need the diversion afforded along with the improvement of your skill as a physician obtainable at these meetings, whether they be postgraduate sessions or your county society. —C.A.R.

INSURANCE DIVIDENDS

Still a further idea as to how the association's automotive insurance plan operates is shown in three renewal policies forwarded early in November. On one of these, the member had paid total premiums of $39.78 and he drew a dividend of $11.69. Another with fire and theft coverage only had paid $23.70 but his dividend was $7.21. The third

paid $41.96 and he received a dividend of $10.78. So, here are three members who saved virtually the cost of their state association dues through the simple medium of permitting the executive secretary to take care of their automobile insurance for them. Or, they received public liability and property damage protection and the benefits of association membership for the cost of their automobile insurance alone.

While the insurance program has not progressed rapidly, yet the number of members availing themselves of its benefits steadily is increasing and within another twelve months it is anticipated that a majority of members will do likewise. —S.O.N.

SCARLET FEVER THERAPY

At this season of the year when scarlet fever is so prevalent it may be of some value to briefly outline the measures commonly adopted for its therapeusis and prophylaxis.

Following the report in 1923, of the work done by Drs. G. F. Dick and G. H. Dick it has generally been accepted that the causative factor in this disease is the Streptococcus Scarlatinae-Hemolyticus. With this established it was but a comparatively short step toward the manufacture of sera for the prevention and treatment of scarlet fever.

To determine the susceptibility to scarlet fever the Dick skin test, analogous to the use of the Shick test for determining immunity to diphtheria, has proven of value.

On children from one month to five years it is hardly necessary to use the Dick test as a routine measure as 60 per cent are susceptible to scarlet fever. Instead active immunization, when placed upon a more uniform basis, should be performed. Over five years of age the Dick test should precede toxin vaccination as from 60 to 85 per cent are apparently immune.

For active immunization the Scarlet Fever Committee recommends five injections of 500, 1,500, 5,000, 15,000, and 20,000, skin test doses of toxin at one week intervals.

Young and Orr recommend three injections of 500, 5,000, and 30,000 skin test doses at intervals of two weeks.

Kolmer prefers the first method with the substitution of 250 for 500 as the initial dose in children. By this method reaction is reduced to a minimum and immunity is conferred upon 80 to 90 per cent of those showing a positive skin reaction, lasting about three years. The work in this field is still experimental.

For patients exposed to scarlet fever, if the incubation period permits, a Dick test should be performed. Otherwise an immunizing dose of scarlet fever antitoxin consisting of 1 to 5 c.c. of concentrated serum should be given subcutaneously or intramuscularly. This is approximately sufficient serum to neutralize 50,000 to 100,000 skin test doses of toxin.

For active cases of scarlet fever the usual routine treatment should be supplemented by the immediate subcutaneous or intramuscular injection of enough concentrated serum to neutralize 200,000 skin test doses of toxin. If given after the fourth day of the disease, the intravenous route is preferred. Scarlet fever antitoxin has proven of definite value in reducing the mortality and the occurrence of complications, though once the complications have occurred it has no curative effect upon them.

The serum when given for prophylactic or therapeutic purposes produces a rather high incidence of serum reaction occurring about the seventh to ninth day after injection. In most cases this is not severe and does not overbalance the benefits procured by its injection.

There is one further use of the serum and that is in the differential diagnosis of the scarlet fever rash. If the O. 1C. C of anti-scarlet fever serum is injected into the skin of a suspicious scarlet rash a blanching of the skin will occur over an inch in diameter in the case of scarlet fever. This is called the Schultz-Charlton reaction and has proven of value in diagnosis.

HUGH G. THOMPSON, M. D.

STATE AND GENERAL NEWS NOTES

DEATHS

John Morris McConihay

John Morris McConihay, 73 years old, honary member of the West Virginia State Medical association, died at his home in Charleston Tuesday, November 2, as result of a stroke of paralysis suffered November 6, 1922. Dr. McConihay was one of the two affiliated members of the American Medical association in this state, Dr. S. S. Staunton of Charleston being the other.

Dr. McConihay was born in Cabell county. He graduated at Dennison University, Granville, O., and then studied medicine at the Kentucky School of Medicine, Louisville, graduating in 1876. He was licensed to practice medicine in West Virginia in 1881, locating in Putnam county. There he married Miss Annie Eveleth who died several years ago. Dr. McConihay came to Charleston in 1891.

According to available records, Dr. McConihay was a member of the state association prior to 1907. He always was active in affairs of the association. He was prominent in Masonic circles, being one of the first in Kanawha county to attain the thirty-third degree. For many years he was active in politics as a Democrat. His surviving children are Mrs. Victor Wilkerson, Mrs. W. E. Wilson, Mrs. E. V. King, Miss Vivian McConihay and John M. McConihay, Jr., all of this city.

Editorially, *The Charleston Gazette* paid a fine tribute to his memory on November 5, the article reading:

"It was a gathering of devoted friends that joined with his family at the Episcopal church and the Masons at the grave to pay their respects to the memory of John Morris McConihay, the eminent, beloved physician, who died Tuesday morning after a lingering illness of four years. In 1922, he was stricken with paralysis, followed by other strokes later, that have kept him bed-ridden through the anxious four years. The shock of his taking away has long since passed, for there has never been any hope of his recovery; yet it was an impressive, large funeral that gave evidence of the high place which he held in the affections of a large circle of friends. He was an exemplary citizen, public spirited, upright in all his dealings and faithful to ideals and obligations. To have his friendship and confidence was a treasure for he regarded these ties of life as sacred obligations that may not be even overlooked in any crisis. His life work was crowned with fidelity and nobility. He had the rare distinction of having been made a 33rd degree Mason, an honor conferred upon those who have distinguished themselves by living up to the principles of Masonry and by unselfish, signal work for the craft. This is an honor that must come unsought and has no relation to business, professional, or political achievement. In this Masonic Lodge there are but five living, upon whom this degree has been conferred, W. T. Eisensmith, A. S. Alexander, L. E. Smith, Delbert Robinson and Charles N. McWhorter.

"Distinguished in his profession, attaining the highest honors in Masonry, successful in business, prominent in work of charity and benevolence, ever maintaining high standards of citizenship—such a man is needed by a community, and his passing away is indeed a loss.

"May his correct Christian life and character water the flowers along the mysterious path that he now travels alone; and may the help and comfort which he gave to others while he sojourned on earth, be his passport to happiness in the land of eternity.

"His sorrowing family has our deepest sympathy; but we congratulate them that as they stand, the victims of the inevitable, they embrace the inestimable heritage of a noble life, to sustain and guide them in every responsibility."

Samuel Hunter Austin

Samuel Hunter Austin, 86 years old, of Lewisburg, died of pneumonia in a Charleston hospital Wednesday, November 6 Fu-

neral services were conducted at the old Stone church under supervision of the Masonic Blue Lodge of Lewisburg. Dr. Austin is survived by his widow, Mary Copeland Austin; and children, Mrs. W. E. R. Byrne of Charleston, Mrs. W. G. Caperton of Slab Fork, Mrs. John D. Pugh of Baltimore, Samuel M. Austin of Lewisburg, Mrs. D. Meade Mann of Rocky Mount, N. C., and Mrs. G. H. Caperton, Jr., of Rush Run, W. Va.

Dr. Austin was for many years a practicing physician in Lewisburg where he located at the close of the war between the states. He served in the Confederate armies as assistant surgeon with the rank of Captain. In 1865 he was married to Mary Copeland McPherson of Lewisburg.

During his long career as a physician in Greenbrier and adjoining counties he was universally loved and respected and enjoyed extended acquaintance throughout the state generally. He retired from active practice several years ago.

A. M. A. STARTS SEARCH FOR INDIGENT DOCTORS

At the annual session of the House of Delegates of the American Medical association in Dallas last Spring, the President was authorized to appoint a committee to make a survey of the physical and financial condition of those of its members who are incapacitated with the object of establishing and sustaining a home for their care and maintenance. This committee is directed to "make a full and comprehensive report of its findings with recommendations to the House of Delegates in 1927."

Accordingly, Dr. G. H. Simmons, one of the editors and general manager emeritus of *The Journal of the A. M. A.*, has asked the cooperation of the county societies in West Virginia to determine if there are any physicians in the state so incapacitated as to warrant that their names be reported. The secretaries and other officers of the state association have been requested to make such reports to the executive secretary at the earliest possible date so that the data may be forwarded to Dr. Simmons.

Insofar as can be learned, there are no doctors in West Virginia who would be eligible for admission to a national home. However, there may be isolated cases and it is hoped that all of the members will cooperate with the executive secretary so that his report may be complete and the national committee will know exactly the situation in this state.

DEATH RATE INCREASING IN 4 OUT OF 5 STATES

According to statistics just available from the Department of Commerce, the death rate in 1925 shows a decrease in four out of five states as compared with 1924. The 1925 death rate in Colorado was 1,207 per 100,000 population as compared with 1,247 in 1924; in North Carolina it was 1,158 as compared with 1,221; in Tennesse it was 1,337 as compared with 1,162; in Montana it was 772 as compared with 790. Massachusetts was the only state showing a gain, the rate for 1925 being 1,242 per 100,000 population as compared with 1,203 and according to the statement, this increase is attributable by higher death rates from diseases of the heart, pneumonia, nephritis, influenza, measels and whooping cough. Massachusetts had a decrease in diphtheria deaths of from 13 per 100,000 population to 8, which is indeed a low figure and undoubtedly is due to increased use of toxin-anti-toxin.

In all of the five states increases were noted in the death rate for pneumonia, diseases of the heart, influenza, and whooping cough and these five states are widely scattered thus indicating that the conditions are general.

CANCER MORTALITY STEADILY INCREASES

An increase in deaths resulting from cancer, amounting to about 30 per cent in persons of 40 years of age and over, has occurred between 1900 to 1920, it has been stated by the United States Public Health Service.

An intense study of cancer mortality which has been conducted by health service officials in the ten original registration states of the United States, disclosed this death rate increase, Health Service officials said. The study also disclosed that this increased mor-

tality occurred both from cancers both of accessible and inaccessible "sites" type and that "pronounced increases were noted in the mortality from cancer of the buccal cavity, of the breast, and of the female genital organs."

At the same time Health Service officials asserted that "no special developments in measures for combatting cancer" have been developed in the United States. For many years, it was stated, the American Society for the Control of Cancer has carried on an educational campaign by means of popular lectures, for the purpose of educating the general public in regard to the disease, but, it was brought out, "there has been little organized official activity of the Federal or various state health organizations in the control of the disease.

"This is not due to a lack of interest so much as to the difficulty involved in planning an effective campaign," officials stated. "Nevertheless, the cancer problem is a subject of serious thought on the part of many state health officers, and endeavors are being made to formulate plans which may aid in dealing with it."

Statistics compiled as a result of the survey made by the Health Service during the period from 1900 to 1923, in the ten states comprising the original registration area, reveal that in 1900 the mortality rate was 64.0 per 100,000 population, where in 1923 it was 106.6 per 100,000. The steady trend of its mortality increase is set forth in the comparative figures for the intervening years. In 1905 it was 73.7 per 100,000 population, in 1910, 83.0; 1915, 92.0; 1920, 98.9; 1921, 102.6; 1922, 105.1 and in 1923, the provision figures of 106.6.

DR. MATAS HONORED

The Boston Surgical society has awarded the Jacob Bigelow medal to Dr. Rudolph Matas of New Orleans, for being one of the men who has done most for the advancement of surgery, it is announced. Previous awards have been made to Dr. William J Mayo of Rochester, Minn., and Dr. William W. Keen of Philadelphia.

TO AID PRACTITIONERS

Physicians treating venereal disease cases have frequently expressed a need for a pamphlet containing instructions and advice to be given to venereal disease patients. Due to the nature of these diseases and the regimen which proper treatment requires, the need for such a publication has long been apparent. Some time ago the U. S. Public Health Service prepared a pamphlet known as, "Important Confidential Information" expressly for this purpose. The leaflet is in two parts, one dealing with gonorrhea and the other with syphilis. Advice is given among other points on the following: Importance of continuing treatment until cured, proper diet while under treatment, proper care to prevent the spread of the disease, the futility and danger of quacks and self treatment, sex conduct and marriage. Copies of this publication are available from most State Departments of Health or they may be secured by writing to the U. S. Public Health Service, Washington, D. C.

VIRGINIANS HONORED

Doctors Everett E. Watson and S. S. Gale of Salem, Va., both of whom are well known to West Virginia physicians, have been elected to active membership in the American Society for Thoracic Surgery. The active membership of this society is limited to 100 members.

LOCATES IN HUNTINGTON

Cards have been received announcing that Dr. James Carney Hardman of St. Louis, has located in the Coal Exchange building, Huntington, to resume the practice of medicine and general surgery.

JOURNAL INCREASES SIZE

Announcements have been received that *The Radiological Review* will be published monthly instead of bi-monthly, beginning with the January, 1927, issue and that its number of pages will be increased from 32 to 64. It is published in Quincy, Illinois.

INDEX TO VOLUME XXII

THE WEST VIRGINIA MEDICAL JOURNAL

A

Abdomen, Acute, with Special Reference to Diagnosis—H. B. Luttrell, M. D. 75
Abscess, Verminous—Case Report—C. F. Fisher, M. D., and Wm. P. Bittinger, M. D. 314
Acidosis, Non-Diabetic, Dietary Treatment of—Albert H. Hoge, M. D. 57
Anesthesia, General—Eldon B. Tucker, M. D. 531
Angina Pectoris, Differential Diagnosis of—Oscar B. Biern, M. D. 397
Annual Meeting, Fifty-ninth 38, 161, 211, 256, 369
Arthritis, Chronic, The Pathology and Treatment of—Ralph Pemberton, M. D. 233
Axis, Left Lateral Incomplete Dislocation of—Report of a Case—C. A. Latham, M. D. 584

B

Banks, Bankhead—Triple Intestinal Intussusception 669
Bay, Robert P.—Surgery of Thyroid Gland 134
Barksdale, G. H.—Chronic Nephritis, Special Reference to Classification and Treatment 305
Climate as Related to Treatment of Pulmonary Tuberculosis 528
Beckner, William F.—Acute Otitis Media 658
Beinhauer, L. G.—Psoriasis 586
Berman, D.—Measles 539
Biern, Oscar B.—The Differential Diagnosis of Angina Pectoris 397
Biliary Drainage, Medical—M. I. Mendleoff, M. D. 354
Biliary Surgery—A. C. Harrison, M. D. 225
Biliary Tract, Consideration of Early Operation in Diseases of—C. A. Groomes, M. D. 511
Biliousness, Real Significance of Term—Douglas Vanderhooff, M. D. 66
Bittinger, William P.—Verminous Abscess—Case Report 314
Bland, P. Brooke—The Management of Labor 623
Bloodgood, Joseph Colt—Cancer of the Mouth 316
Bloss, James R.—Presidents Address 281
Observations upon the Use of Pituitrin in Obstetric Practice 1
Bone Lesions, X-ray Study of, Special Reference to Bone Tumors—Max Kahn, M. D. 79
Book Reviews 48, 223, 275, 433, 493, 605
Brain Tumors, Diagnosis and Treatment of—Walter E. Dandy, M. D. 169
Broeman, C. J.—Indications and Contra-Indications for Radium 460
Brugh, Ben F.—Case of Uterus Bicornis Unicollis with Rupture of a Gravid Horn Followed by Operation and Recovery 636
Buford, Robert King—The Combined Use of Glucose and Insulin in Surgery 240
Butt, A. P.—Gastrotomy for Food Over-Distention 393

C

Calmette, A.—Our Present Knowledge of Anti-Tubercular Vaccination 467
Cancer of the Mouth—Joseph Colt Bloodgood, M. D. 316
Cannady, John E.—Gall Bladder Disease 142
The Surgical Clinics of Paris 446
Cecum and Ascending Colon, Dilatation and Malposition of, Due to Developmental Defects—E. Bennette Henson, M. D. 344
Childbirth, Painless—Nathan Poliakoff, M. D. 312
Chiropractors 442
Cholecystectomy vs. Cholecystotomy—H. C. Powell, M. D. 514
Cicatrical Contraction, The Cause of—J. Shelton Horsley, M. D. 363
Clements, Bernard S.—Treatment of Eclampsia by the General Practitioner 128
Clovis, Charles H.—Artificial Nose—Case Report 361
Coleman, Claude C.—Further Observations on Spinal Block in Acute Cord Injury 561

Constipation, Chronic—K. M. Jarrell, M. D. 358
Convulsive Seizures, Clinical Significance of—Hanson S. Ogilvie, M. D. 10
County Society Reports 42, 92, 154, 205, 270, 323, 366, 426, 487, 548, 597
County Society Secretary—J. C. Irons, M. D. 414
Craft, J. H.—Sciatic Paralysis Following Snake-bite 26
Cromwell, Guy N.—Gastrotomy for Food Over-Distention 393

D

Dandy. Walter E.—Diagnosis and Treatment of Brain Tumors 169
Deaths 55, 101, 163, 213, 221, 274, 329, 436, 494, 504, 606
Diabetes, Familial—William W. Strange, M. D. 174
Diagnosis, Rational Procedure Leading Toward—Ray Kessel, M. D. 301
Digestive Tract, Observations upon Some Common Disorders of—
J. W. Preston, M. D. 70
Dillon, M. L.—Parinaud's Conjunctivitis with Report of a Case 587

E

Ear, Nose and Throat, Conditions Complicating Diseases of—C. B. Wylie, M. D. 662
Eclampsia, Treatment of, by General Practitioner—Bernard S. Clements, M. D. 128
Editorials 33, 87, 147, 200, 254, 319, 365, 421, 481, 544, 591, 671
Edmondson, R. H.—A Review of a Health Survey of 68 Cities 579
Eye, Ear, Nose and Throat Practice, Observations in—T. W. Moore, M. D. 243

F

Fawcett, Ivan—Early Diagnosis and Treatment of Acute Purulent Otitis Media 405
Femoral Shaft, Fractures of the—A. G. Rutherford, M. D. 6
Fisher, C. F.—Priapism—Report of a Case Requiring Surgical Treatment 638
Verminous Abscess—Case Report 314
Focal Infection as an Etiological Factor in Urological Conditions—
G. G. Irwin, M. D. 646
Fox, P. R.—Acute Abdomen with Special Reference to Diagnosis 75
Fractures from Department's Viewpoint—Lee Ott, State Workmen's Compensation Commissioner 29
Fracture of Upper Third of Humerus—E. Bennett Henson, M. D. 83

G

Gall Bladder Complications Incident to Operative Treatment of Inflammatory Diseases of—Aime Paul Heineck, M. D. 519
Gall Bladder Disease—John E. Cannady, M. D. 142
Gastrointestinal History—Walter E. Vest, M. D. 19
Gastrotomy for Food Over-Distention—
A. P. Butt, M. D., and Guy N. Cromwell, M. D. 393
Goitre—R. Richard Renner, M. D. 652
Golden, W. W.—Delayed Union 27
Goldstein, Albert E.—The Diagnosis and Treatment of Urinary Stasis 505
Groomes, C. A.—Consideration of Early Operation in Diseases of the Biliary Tract 511

H

Hand Injuries and Infections, Some Observations of—R. H. Walker, M. D. 456
Harrison, A. C.—Biliary Surgery 225
Health Survey of 68 Cities, A Review of a—R. H. Edmondson, M. D. 579
Health Unit, Full-time, How it is Beneficial to the Practice of Medicine—
John Thames, M. D. 449
Heart and Cholelithiasis—A. A. Sussman, M. D. and J. R. Wilkerson, M. D. 576
Heinick, Aime Paul—Complications Incident to Operative Treatment of Inflammatory Diseases of Gall Bladder 519
Henson, E. Bennette—Dilatation and Malposition of Cecum and Ascending Colon due to Developmental Defects 344
Fractures of Upper Third of Humerus 83
Hoge, Albert H.—Dietary Treatment of Non-Diabetic Acidosis 57
Horsley, J. Shelton—The Cause of Cicatrical Contraction 363
House of Delegates, Minutes of 377

Hunt, Verne C.—Benign Prostatic Obstruction and the Relation of Associated Problems to its Surgical Management 639
Hupp, Frank LeMoyne—Some Problems of the West Virginia Board of Examiners for Registered Nurses 191
Hysteria—C. H. Maxwell, M. D. 120

I

Inguinal Hernia Complicated by Hernia of Ovaries and Tubes—W. N. Rowley, M. D. 23
Intestinal Intussusception, Triple—Bankhead Banks, M. D. 669
Intestinal Obstruction, Acute—R. J. Wilkinson, M. D. and W. C. Kappes, M. D. 180
Irons, J. C.—County Society Secretary 414
Irwin, G. G.—Focal Infection as an Etiological Factor in Urological Conditions 646

J

Jarrell, K. M.—Chronic Constipation 358
Johnson, H. R.—Report of an Otological Case 402

K

Kahn, Max—An X-ray Study of Bone Lesions with Special Reference to Bone Tumors 79
Kappes, W. C.—Acute Intestinal Obstruction 180
Kessel, C. R.—Chlorine in Treatment of Respiratory Infections 130
Kessel, Ray—Rational Procedure Leading Toward Diagnosis 301
Klump, James S.—Oral Sepsis as an Etiological Factor in Peptic Ulcer 248

L

Labor, The Management of—P. Brooke Bland, M. D. 623
Laryngeal Tuberculosis, Diagnosis and Treatment of—Edward A. Looper, M. D. 476
Latham, C. A.—Left Lateral Incomplete Dislocation of the Axis—With Report of a Case 584
Life, Prolongation of—Curran Pope, M. D. 113
Looper, Edward A.—Diagnosis and Treatment of Laryngeal Tuberculosis 476
Luttrell, H. B.—Acute Abdomen with Special Reference to Diagnosis 75
Lyon, George M.—The Duration of Passive Immunity in Measles Prophylaxis 291
Ether in Treatment of Secondary Pneumonias of Childhood 229

M

MacKenzie, George W.—Differential Diagnosis of Syphilis and Focal Infection from the Eye and Ear Manifestations 292
Magill, William S.—(Translater) Our Present Knowledge of Anti-Tubercular Vaccination 467
Marple, F. O.—Neuritis of the Eighth Cranial Nerve 407
Maxwell, C. H.—Hysteria 120
McCarthy, M. F.—Newer Methods of Handling Infections of the Upper Respiratory Tract 410
McKenzie, J. E.—Medical Treatment of Inflammation of the Nasal Accessory Sinuses 245
Measles—D. Berman, M. D. 539
Measles, Prophylaxis, The Duration of Passive Immunity in—Geo. M. Lyon, M. D. 291
Medicine, Oration on—J. H. J. Upham, M. D. 337
Memberships 39, 104
Mendeloff, M. I.—Medical Biliary Drainage 354
Moore, T. W.—Observations in Eye, Ear, Nose and Throat Practice 243
Morris, W. Ross—Acute Parenchymatous Nephritis 308

N

Nephritis, Acute Parenchymatous—W. Ross Morris, M. D. 308
Nephritis, Chronic, Special Reference to Classification and Treatment—G. H. Barksdale, M. D. 305
Neuritis of the Eighth Cranial Nerve—F. O. Marple, M. D. 407
Nose, Artificial—Case Report—Charles H. Clovis, M. D. 361

Novak, Emil—The Chief Causes of Uterine Hemorrhage and Treatment 184
Nurses, Some Problems of the West Virginia Board of Examiners for Registered Nurses—Frank LeMoyne Hupp, M. D. 191

O

Occiput Posterior Presentations and Their Treatment—Walter W. Point, M. D. 188
Ogden, Chester R.—The Drama of Surgery in West Virginia 286
Ogilvie, Hanson S.—Clinical Significance of Convulsive Seizures 10
Otitis Media, Acute—William F. Beckner, M. D. 658
Otitis Media, Early Diagnosis and Treatment of Acute Purulent—Ivan Fawcett, M. D. 405
Otological Case, Report of an—H. R. Johnson, M. D. 402
Ott, Lee—Fractures from the Department's Viewpoint 29

P

Paralysis, Sciatic, Following Snake-bite—J. H. Craft, M. D. 26
Parinaud's Conjunctivitis with Report of a Case—M. L. Dillon, M. D. 587
Pelvic Varicocele—Magnus A. Tate, M. D. 572
Pemberton, Ralph—The Pathology and Treatment of Chronic Arthritis 233
Phillips, Howard T.—Indications and Limitations of X-ray Therapy in Diseases of the Skin 473
Pituitrin, Observations upon the Use of in Obstetric Practice—James R. Bloss, M. D. 1
Pneumonias of Childhood, Ether in the Treatment of Secondary—Geo. M. Lyon, M. D. 229
Point, Walter W.—Occiput Posterior Presentations and Their Treatment 188
Poisoning, Shoe-Dye—Report of a Case—C. A. Ray, M. D. 542
Poliakoff, Nathan—Painless Childbirth 312
Poliomyelitis, Acute—H. A. Walkup, M. D. 565
Pope, Curran—The Prolongation of Life 113
Powell, H. C.—Cholecystectomy vs. Cholecystotomy 514
Pregnancy, The Treatment of Vomiting of—Paul Titus, M. D. 617
President's Address—James R. Bloss, M. D. 281
Preston, J. W.—Observations upon Some Common Disorders of Digestive Tract 70
Priapism—Report of Case Requiring Surgical Treatment—C. F. Fisher, M. D. 638
Price, Lawrence T.—Urology from General Practitioner's Standpoint 16
Prostatic Obstruction, Benign, and the Relation of Associated Problems to its Surgical Management—Verne C. Hunt, M. D. 639
Psoriasis—L. G. Beinhauer, M. D. 586
Pulmonary Tuberculosis, Climate as Related to Treatment of—Geo. H. Barksdale, M. D. 528
Pulmonary Tuberculosis, Fallacies in Diagnosis of—Paul H. Ringer, M. D. 175

R

Radium Indications and Contra-Indications for—C. J. Broeman, M. D. 460
Ray, C. A.—Shoe-Dye Poisoning—Report of a Case 542
Renner, R. Richard—Goitre 652
Respiratory Infections ,Chlorine in Treatment of—C. R. Kesssel, M. D. 130
Respiratory Tract, Newer Methods of Handling Infections of the Upper—M. F. McCarthy, M. D. 410
Ringer, Paul H.—Fallacies in Diagnosis of Pulmonary Tuberculosis 175
Rowley, W. N.—Inguinal Hernia Complicated by Hernia of Ovaries and Tubes 23
Rutherford, A. G.—Management of Fractures of the Femoral Shaft 6

S

Sarcoma of Choroid—Raymond A. Tomassene, M. D. 82
Schriver, L. Howard—Surgical Aspects of the Thyroid 349
Sheppard-Towner Act 152, 498, 557, 615
Sinuses, Nasal Accessory, Medical Treatment of Inflammation of—J. E. McKenzie, M. D. 245
Smith, E. P.—Ureteral Obstruction 648
Spinal Block in Acute Cord Injury, Further Observations on—Claude C. Coleman, M. D. 561

State and General News.....45, 98, 158, 209, 272, 328, 429, 491, 551, 600
Strange, William W.—Familial Diabetes..... 174
Surgery, Combined Use of Glucose, and Insulin in—Robert King Buford, M. D. 240
Surgery, The Drama of, in West Virginia—Chester R. Ogden, M. D..... 286
Surgical Clinics of Paris—John E. Cannady, M. D..... 446
Sussman, J. A.—Heart and Cholelithiasis..... 576
Syphilis and Focal Infection from the Eye and Ear Manifestations, Differential Diagnosis of—Geo. W. Mackenzie, M. D..... 292

T

Tate, Magnus A.—Pelvic Varicocele..... 572
Thames, John—How a Full-time Health Unit is Beneficial to the Practice of Medicine 449
Thyroid Diseases, Medical Aspects of—David A. Tucker, Jr., M. D..... 139
Thyroid Gland, Surgery of—Robert P. Bay, M. D..... 134
Thyroid, Surgical Aspects of the—L. Howard Schriver, M. D..... 349
Titus, Paul—The Treatment of Vomiting of Pregnancy..... 617
Tomassene, Raymond A.—Sarcoma of Choroid..... 82
Tubercular—Anti, Vaccination, Our Present Knowledge of—Prof. A. Calmette.... 467
Tuberculosis, Pulmonary, Fallacies in Diagnosis of—Paul H. Ringer, M. D..... 175
Tucker, David A., Jr.—Medical Aspects of Thyroid Diseases..... 139
Tucker, Eldon B.—General Anesthesia..... 531

U

Ulcer, Peptic, Oral Sepsis as an Etiological Factor in—James S. Klump, M. D. 248
Union Delayed—W. W. Golden, M. D..... 27
Upham, J. H. J.—Oration on Medicine..... 337
Ureteral Obstruction—E. P. Smith, M. D..... 652
Urinary Stasis, Diagnosis and Treatment of—Albert E. Goldstein, M. D..... 505
Urology from General Practitioner's Standpoint—Lawrence T. Price, M. D..... 16
Uterine Hemorrhage, Chief Causes and Treatment—Emil Novak, M. D..... 184
Uterus Bicornis Unicollis, a Case of, with Rupture of a Gravid Horn Followed by Operation and Recovery—Ben F. Brugh, M. D..... 636

V

Vanderhoof, Douglas—Real Significance of Term Biliousness..... 66
Vest, Walter E.—Gastrointestinal History..... 19

W

Walker, R. H.—Some Observations of Hand Injuries and Infections..... 456
Walkup, H. A.—Acute Poliomyelitis..... 565
Wilkerson, J. R.—Heart and Cholelithiasis..... 576
Wilkinson, R. J.—Acute Intestinal Obstruction..... 180
Wylie, C. B.—Conditions Complicating Diseases of the Ear, Nose and Throat..... 662

X

X-ray Therapy in Diseases of the Skin, Indications and Limitations of—Howard T. Phillips, M. D..... 473

Consider This:—

WHEN the racking cough begins to diminish and the soreness in the chest disappears, you need not have any doubt as to the improvement of your patient, for the infection in the respiratory tract is yielding to Thiocol.

Here is the point, Thiocol Syrup 'Roche', unlike most cough remedies, does not contain any narcotic or sedative drug. It does not disguise the true situation by simply stifling the symptoms. It is, rare as it may seem, a

ONE-DRUG Cough Remedy.

It contains simply Thiocol, a "Council" accepted product, which exerts an anti-catarrhal, beneficial effect upon the respiratory organs and definitely aids in subduing the cough.

THIOCOL SYRUP 'ROCHE'

is what we may term a *rational* cough remedy. That is why it is so widely employed and also why we are anxious to give you the opportunity of proving its value. We will gladly send you a supply for the purpose if you will write us.

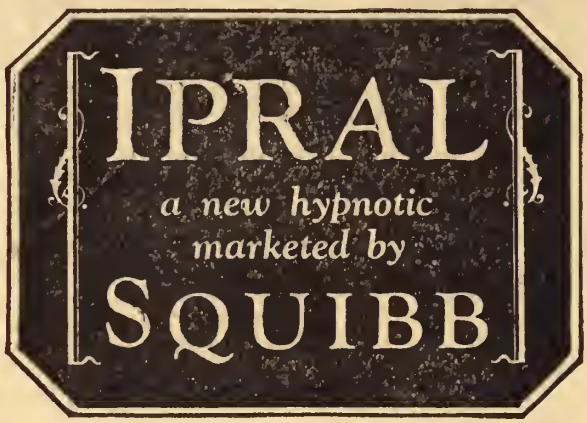
Dosage: **2 teaspoonfuls every 2 or 3 hours, according to severity of cough.**

Marketed in 6-ounce bottles.

The Hoffmann-La Roche Chemical Works, New York

Makers of Medicines of Rare Quality

ANNOUNCING...



The Calcium Salt of Ethylisopropylbarbituric Acid

Accepted by the Council on Pharmacy and Chemistry A. M. A.

IPRAL SQUIBB approximates the ideal hypnotic because:

It is quickly soluble in water, hence quickly absorbed and rapid in action.

Its average effective dose is small (2 to 4 grains).

In therapeutic dose, it affects only the higher cerebral centers.

Its action on the heart is negligible when administered in therapeutic doses.

It is not habit-forming and it produces sleep which closely approximates the normal.

IPRAL is marketed as 2 grain tablets, in vials of ten and in bottles of one hundred.

{ *Write to Professional Service Department for Literature* }

E·R·SQUIBB & SONS, NEW YORK

MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA

This Book is due on the last date stamped below. **No further preliminary notice will be sent.** Requests for renewals must be made on or before the date of expiration.

DUE	RETURNED

A fine of twenty-five cents will be charged for each week or fraction of a week the book is retained without the Library's authorization.